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APPLICANTS: Spytek et al.

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EXAMINER: Not Yet Assigned

FILING DATE: September 27, 2001

ART UNIT: 1645

FOR: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME

BOX Missing Parts

Commissioner for Patents and Trademarks
Washington, D.C. 20231

**STATEMENT IN SUPPORT OF COMPUTER READABLE
FORM SUBMISSION UNDER 37 C.F.R. § 1.821(f)**

I hereby state that the content of the paper and computer readable forms of the Sequence Listing, submitted in the above-identified application in accordance with 37 C.F.R. § 1.821(c) and 1.821(e), respectively, are the same. No new matter is added.

Respectfully submitted,

Matthew Pavao

Matthew Pavao, Reg. No. 50,572
Attorney for Applicants
c/o MINTZ, LEVIN
One Financial Center
Boston, Massachusetts 02111
Tel: (617) 542-6000
Fax: (617) 542-2241

Dated: March 28, 2002

TRA 1647407v1



SEQUENCE LISTING

<110> Spytek, Kimberly A
Casman, Stacie
Padigaru, Muralidhara
Dickson, Kevin
Vernet, Corine
Spaderna, Steven K
Shenoy, Suresh G
Gerlach, Valerie
Ellerman, Karen
Edinger, Shlomit
MacDougall, John R
Smithson, Glennda
Li, Li
Malyankar, Uriel M
Taylor, Sarah
Gunther, Erik
Tchernev, Velizar T

<120> Novel Proteins and Nucleic Acids Encoding Same

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45

Ser Val Leu Asp Ile His Leu His Thr Pro Val Tyr Phe Phe Leu Gly
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Asn Leu Ser Thr Leu Asp Ile Cys Tyr Thr Pro Thr Phe Val Pro Leu
65 70 75 80

Met Leu Val His Leu Leu Ser Ser Arg Lys Thr Ile Ser Phe Ala Val
85 90 95

Cys Ala Ile Gln Met Cys Leu Ser Leu Ser Thr Gly Ser Thr Glu Cys
100 105 110

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115 120 125

Pro Leu Arg Tyr Pro Glu Leu Met Ser Gly Gln Thr Cys Met Gln Met
130 135 140

Ala Ala Leu Ser Trp Gly Thr Gly Phe Ala Asn Ser Leu Leu Gln Ser
145 150 155 160

Ile Leu Val Trp His Leu Pro Phe Cys Gly His Val Ile Asn Tyr Phe
165 170 175

Tyr Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Gly Asp Ile Ser Leu
180 185 190

Asn Ala Leu Ala Leu Met Val Ala Thr Ala Val Leu Thr Leu Ala Pro
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Leu Leu Leu Ile Cys Leu Ser Tyr Leu Phe Ile Leu Ser Ala Ile Leu
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Arg Val Pro Ser Ala Ala Gly Arg Cys Lys Ala Phe Ser Thr Cys Ser
225 230 235 240

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260 265 270

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275 280 285

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35 40 45
Val Leu Ile Leu Ile Leu Tyr Leu Leu Thr Ile Leu Gly Asn Thr Thr
50 55 60
Ile Ile Leu Val Ser Arg Leu Glu Pro Lys Pro His Met Pro Met Tyr
65 70 75 80
Phe Phe Leu Ser His Leu Ser Phe Leu Tyr Arg Cys Phe Thr Ser Ser
85 90 95
Val Ile Pro Gln Leu Leu Val Asn Leu Trp Glu Pro Met Lys Thr Ile
100 105 110
Ala Tyr Gly Gly Cys Leu Val His Leu Tyr Asn Ser His Ala Leu Gly
115 120 125
Ser Thr Glu Cys Val Leu Pro Ala Leu Met Ser Cys Asp Arg Tyr Val
130 135 140

Ala Val Cys Arg Pro Leu His Tyr Thr Val Leu Met His Ile His Leu
145 150 155 160

Cys Met Ala Leu Ala Ser Met Ala Trp Leu Ser Gly Ile Ala Thr Thr
165 170 175

Leu Val Gln Ser Thr Leu Thr Leu Gln Leu Pro Phe Cys Gly His Arg
180 185 190

Gln Val Asp His Phe Ile Cys Glu Val Pro Val Leu Ile Lys Leu Ala
195 200 205

Cys Val Gly Thr Thr Phe Asn Glu Ala Glu Leu Phe Val Ala Ser Ile
210 215 220

Leu Phe Leu Ile Val Pro Val Ser Phe Ile Leu Val Ser Ser Gly Tyr
225 230 235 240

Ile Ala His Ala Val Leu Arg Ile Lys Ser Ala Thr Gly Arg Gln Lys
245 250 255

Ala Phe Gly Thr Cys Phe Ser His Leu Thr Val Val Thr Ile Phe Tyr
260 265 270

Gly Thr Ile Ile Phe Met Tyr Leu Gln Pro Ala Lys Ser Arg Ser Arg
275 280 285

Asp Gln Gly Lys Phe Val Ser Leu Phe Tyr Thr Val Val Thr Arg Met
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35 40 45

Val Leu Ile Leu Ile Leu Tyr Leu Leu Thr Ile Leu Gly Asn Thr Thr
50 55 60

Ile Ile Leu Val Ser Arg Leu Glu Pro Lys Leu His Met Pro Met Tyr
65 70 75 80

Phe Phe Leu Ser His Leu Ser Phe Leu Tyr Arg Cys Phe Thr Ser Ser
85 90 95

Val Ile Pro Gln Leu Leu Val Asn Leu Trp Glu Pro Met Lys Thr Ile
100 105 110

Ala Tyr Gly Gly Cys Leu Val His Leu Tyr Asn Ser His Ala Leu Gly
115 120 125

Ser Thr Glu Cys Val Leu Pro Ala Leu Met Ser Cys Asp Arg Tyr Val
130 135 140

Ala Val Cys Arg Pro Leu His Tyr Thr Val Leu Met His Ile His Leu
145 150 155 160

Cys Met Ala Leu Ala Ser Met Ala Trp Leu Ser Gly Ile Ala Thr Thr
165 170 175

Leu Val Gln Ser Thr Leu Thr Leu Gln Leu Pro Phe Cys Gly His Arg
180 185 190

Gln Val Asp His Phe Ile Cys Glu Val Pro Val Leu Ile Lys Leu Ala
195 200 205

Cys Val Gly Thr Thr Phe Asn Glu Ala Glu Leu Phe Val Ala Ser Ile
210 215 220

Leu Phe Leu Ile Val Pro Val Ser Phe Ile Leu Val Ser Ser Gly Tyr
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Gly	Thr	Ile	Ile	Phe	Met	Tyr	Leu	Gln	Pro	Ala	Lys	Ser	Arg	Ser	Arg
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Asp	Gln	Gly	Lys	Phe	Val	Ser	Leu	Phe	Tyr	Thr	Val	Val	Thr	Arg	Met
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															310
															315
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Ile Leu Leu Gly Phe Ser Asp Tyr Pro Gln Leu Gln Lys Val Leu Phe
35 40 45

Val Leu Ile Leu Ile Leu Tyr Leu Leu Thr Ile Leu Gly Asn Thr Thr
50 55 60

Ile Ile Leu Val Ser Arg Leu Glu Pro Lys Leu His Met Pro Met Tyr
65 70 75 80

Phe Phe Leu Ser His Leu Ser Phe Leu Tyr Arg Cys Phe Thr Ser Ser
85 90 95

Val Ile Pro Gln Leu Leu Val Asn Leu Trp Glu Pro Met Lys Thr Ile
100 105 110

Ala Tyr Gly Gly Cys Leu Val His Leu Tyr Asn Ser His Ala Leu Gly
115 120 125

Ser Thr Glu Cys Val Leu Pro Ala Leu Met Ser Cys Asp Arg Tyr Val
130 135 140

Ala Val Cys Arg Pro Leu His Tyr Thr Val Leu Met His Ile His Leu
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 Cys Met Ala Leu Ala Ser Met Ala Trp Leu Ser Gly Ile Ala Thr Thr
 165 170 175
 Leu Val Gln Ser Thr Leu Thr Leu Gln Leu Pro Phe Cys Gly His Arg
 180 185 190
 Gln Val Asp His Phe Ile Cys Glu Val Pro Val Leu Ile Lys Leu Ala
 195 200 205
 Cys Val Gly Thr Thr Phe Asn Glu Ala Glu Leu Phe Val Ala Ser Ile
 210 215 220
 Leu Phe Leu Ile Val Pro Val Ser Phe Ile Leu Val Ser Ser Gly Tyr
 225 230 235 240
 Ile Ala His Ala Val Leu Arg Ile Lys Ser Ala Thr Gly Arg Gln Lys
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 Ala Phe Gly Thr Cys Phe Ser His Leu Thr Val Val Thr Ile Phe Tyr
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 Gly Thr Ile Ile Phe Met Tyr Leu Gln Pro Ala Lys Ser Arg Ser Arg
 275 280 285
 Asp Gln Gly Lys Phe Val Ser Leu Phe Tyr Thr Val Val Thr Arg Met
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 ttcaccataa tcatcatctc atatctggat cccctcttc ataccccaat gtacttttt 240
 ctcagcaacc tctctttact ggacatctgc ttcaactacta gccttgcctc tcagaccta 300
 gtttaacttgc aaagacccaaa gaagacgatc acttacggtg gttgtgtggc gcaactctat 360
 atttctctgg cactgggctc cactgaatgt atcctcttgg ctgacatggc cttggatcg 420
 tacattgcgt tctgcaaacc cctccactat gtagtcatca tgaacccacg gctttgccaa 480
 cagctggcat ctatctctg gctcagtggt ttgcttagtt ccctaattcca tgcaactttt 540
 actttgcata tgcctctctg tggcaaccat aggctggacc attttatttg cgaagtacca 600
 gctcttctca agttggctt gttggacacc actgtcaatg aattggtgct ttttgggtt 660
 agtggcttgtt ttgttgtcat tccaccagca ctcatctcca tctcctatgg cttcataact 720
 caagctgtgc tgaggatcaa atcagtagag gcaaggcata aagccttcag cacctgctcc 780

tcccaccta cagtggtgat tatattctat ggcaccataa tctacgtgta cctgcaacct 840
agtgacagct atgcccgaga ccaaggaaag tttatctccc tcttctacac catggtgacc 900
cccaactttaa atcctatcat ctatacttta aggaacaagg atatgaaaaga ggctctgagg 960
aaacttctct cggaaaaatt gtgattccta tggacatgtat ttgtc 1005

<210> 12
<211> 309
<212> PRT
<213> Homo sapiens

<400> 12
Met Gly Leu Gly Asn Glu Ser Ser Leu Met Asp Phe Ile Leu Leu Gly
1 5 10 15

Phe Ser Asp His Pro Arg Leu Glu Ala Val Leu Phe Val Phe Val Leu
20 25 30

Phe Phe Tyr Leu Leu Thr Leu Val Gly Asn Phe Thr Ile Ile Ile Ile
35 40 45

Ser Tyr Leu Asp Pro Pro Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Asn Leu Ser Leu Leu Asp Ile Cys Phe Thr Thr Ser Leu Ala Pro Gln
65 70 75 80

Thr Leu Val Asn Leu Gln Arg Pro Lys Lys Thr Ile Thr Tyr Gly Gly
85 90 95

Cys Val Ala Gln Leu Tyr Ile Ser Leu Ala Leu Gly Ser Thr Glu Cys
100 105 110

Ile Leu Leu Ala Asp Met Ala Leu Asp Arg Tyr Ile Ala Val Cys Lys
115 120 125

Pro Leu His Tyr Val Val Ile Met Asn Pro Arg Leu Cys Gln Gln Leu
130 135 140

Ala Ser Ile Ser Trp Leu Ser Gly Leu Ala Ser Ser Leu Ile His Ala
145 150 155 160

Thr Phe Thr Leu Gln Leu Pro Leu Cys Gly Asn His Arg Leu Asp His
165 170 175

Phe Ile Cys Glu Val Pro Ala Leu Leu Lys Leu Ala Cys Val Asp Thr
180 185 190

Thr Val Asn Glu Leu Val Leu Phe Val Val Ser Val Leu Phe Val Val
195 200 205

Ile Pro Pro Ala Leu Ile Ser Ile Ser Tyr Gly Phe Ile Thr Gln Ala
210 215 220

Val Leu Arg Ile Lys Ser Val Glu Ala Arg His Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Ile
245 250 255

Tyr Val Tyr Leu Gln Pro Ser Asp Ser Tyr Ala Gln Asp Gln Gly Lys
260 265 270

Phe Ile Ser Leu Phe Tyr Thr Met Val Thr Pro Thr Leu Asn Pro Ile
275 280 285

Ile Tyr Thr Leu Arg Asn Lys Asp Met Lys Glu Ala Leu Arg Lys Leu
290 295 300

Leu Ser Gly Lys Leu
305

<210> 13

<211> 954

<212> DNA

<213> Homo sapiens

<400> 13

atggaggcaga gcaattattc cggttatgcc gactttatcc ttctggggtt gttcagcaac 60
gcccgttccc cctgggttct ctttgccctc atttccttgg tctttttgac ctccatagcc 120
agcaacgtgg tcaagatcat tctcatccac atagactccc gcctccacac ccccatgtac 180
ttcctgctca gccagctctc cctcaggagac atccgtata ttccaccat tgtgccccaa 240
atgctggctcg accaggtgtat gagccagaga gccatttctt ttgctggatg cactgccccaa 300
cacttcctct acttgcaccc agcaggggct gagttcttcc tccttaggact catgtcctat 360
gatcgctacg tagccatctg caaccctctg cactatcctg tcctcatgag ccgcaagatc 420
tgctggttga ttgtggcgcc agcctggctg ggagggtcta tcgatggttt cttgctcacc 480
cccgtaacca tgcagttccc cttctgtgcc ttcgggaga tcaaccactt cttctgcgag 540
gtgcctgccc ttctgaagct ctcctgcacg gacacatcag cctacgagac agccatgtat 600
gtctgctgta ttatgatgtct cctcatccct ttctctgtca tctcgggctc ttacacaaga 660
atttcattt ctgtttatag gatgagcggag gcagagggga gggaaaggc tgtggccacc 720
tgctcctcac acatgggtgt tgtcagcctc ttctatgggg ctgcatgtt cacatacgtg 780
ctgcctcatt cttaccacac ccctgagcag gacaaagctg tatctgcctt ctacaccatc 840
cttactccca tgctcaatcc actcattac agccttagga acaaggatgt cacaggggcc 900
ctacagaagg ttgtgggag gtgtgtgcc tcaggaaagg taaccactt ctaa 954

<210> 14

<211> 317

<212> PRT

<213> Homo sapiens

<400> 14

Met Glu Gln Ser Asn Tyr Ser Val Tyr Ala Asp Phe Ile Leu Leu Gly
1 5 10 15

Leu Phe Ser Asn Ala Arg Phe Pro Trp Leu Leu Phe Ala Leu Ile Leu
20 25 30

Leu Val Phe Leu Thr Ser Ile Ala Ser Asn Val Val Lys Ile Ile Leu
35 40 45

Ile His Ile Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser
50 55 60

Gln Leu Ser Leu Arg Asp Ile Leu Tyr Ile Ser Thr Ile Val Pro Lys
 65 70 75 80
 Met Leu Val Asp Gln Val Met Ser Gln Arg Ala Ile Ser Phe Ala Gly
 85 90 95
 Cys Thr Ala Gln His Phe Leu Tyr Leu Thr Leu Ala Gly Ala Glu Phe
 100 105 110
 Phe Leu Leu Gly Leu Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu His Tyr Pro Val Leu Met Ser Arg Lys Ile Cys Trp Leu Ile
 130 135 140
 Val Ala Ala Ala Trp Leu Gly Gly Ser Ile Asp Gly Phe Leu Leu Thr
 145 150 155 160
 Pro Val Thr Met Gln Phe Pro Phe Cys Ala Ser Arg Glu Ile Asn His
 165 170 175
 Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Thr Asp Thr
 180 185 190
 Ser Ala Tyr Glu Thr Ala Met Tyr Val Cys Cys Ile Met Met Leu Leu
 195 200 205
 Ile Pro Phe Ser Val Ile Ser Gly Ser Tyr Thr Arg Ile Leu Ile Thr
 210 215 220
 Val Tyr Arg Met Ser Glu Ala Glu Gly Arg Gly Lys Ala Val Ala Thr
 225 230 235 240
 Cys Ser Ser His Met Val Val Ser Leu Phe Tyr Gly Ala Ala Met
 245 250 255
 Tyr Thr Tyr Val Leu Pro His Ser Tyr His Thr Pro Glu Gln Asp Lys
 260 265 270
 Ala Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Thr Gly Ala Leu Gln Lys Val
 290 295 300
 Val Gly Arg Cys Val Ser Ser Gly Lys Val Thr Thr Phe
 305 310 315

<210> 15
 <211> 954
 <212> DNA
 <213> Homo sapiens

<400> 15
 atggagcaga gcaattattc cgtgtatgcc gactttatcc ttctgggttt gttcagcaat 60

gcccgttcc cctggcttct ctttgcctc atttcctgg tctttgtgac ctccatagcc 120
agcaacgtgg tcatacatcat tctcatccac atagactccc gcctccacac ccccatgtac 180
ttcctgctca gccagctctc cctcaggac atcctgtata ttccaccat tgtgccccaa 240
atgctggcg accaggtgat gagccagaga gccatttctt ttgcaggatg cactgccccaa 300
caattccctt acttgaccc agcagggct gaggtttcc tccttaggact catgtcctat 360
gatcgctacg tagccatctg caaccctctg cactatcctg acctcatgag ccgcaagatc 420
tgctgggtga ttgtggcgcc agcctggctg ggagggtcta tcgatggttt cttgctcacc 480
cccgccacca tgcaattccc cttctgtgcc tctcgggaga tcaaccactt cttctgcgag 540
gtgcctgccc ttctgaagct tcctgcacg gacacatcg cctacgagac agccatgtat 600
gtctgtgtta ttatgtatgtc cctcatccct ttctctgtga tctcgggctc ttacacaaga 660
attctcatta ctgttatag gatgagcgag gcagagggga ggcaaaaggc tgtggccacc 720
tgctcctcac acatgggtgt tgtcagcctc ttctatgggg ctgccatgta cacatacgtg 780
ctgcctcatt cttaccacac ccctgagcag gacaaagctg tatctgcctt ctacaccatc 840
ctcaactccca tgctcaatcc actcattac agccttagga acaaggatgt cacgggggccc 900
ctacagaagg ttgtgggag gtgtgtgtcc tcaggaaagg taaccacttt ctaa 954

<210> 16

<211> 317

<212> PRT

<213> Homo sapiens

<400> 16

Met Glu Gln Ser Asn Tyr Ser Val Tyr Ala Asp Phe Ile Leu Leu Gly
1 5 10 15

Leu Phe Ser Asn Ala Arg Phe Pro Trp Leu Leu Phe Ala Leu Ile Leu
20 25 30

Leu Val Phe Val Thr Ser Ile Ala Ser Asn Val Val Met Ile Ile Leu
35 40 45

Ile His Ile Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser
50 55 60

Gln Leu Ser Leu Arg Asp Ile Leu Tyr Ile Ser Thr Ile Val Pro Lys
65 70 75 80

Met Leu Val Asp Gln Val Met Ser Gln Arg Ala Ile Ser Phe Ala Gly
85 90 95

Cys Thr Ala Gln His Phe Leu Tyr Leu Thr Leu Ala Gly Ala Glu Phe
100 105 110

Phe Leu Leu Gly Leu Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu His Tyr Pro Asp Leu Met Ser Arg Lys Ile Cys Trp Leu Ile
130 135 140

Val Ala Ala Ala Trp Leu Gly Gly Ser Ile Asp Gly Phe Leu Leu Thr
145 150 155 160

Pro Val Thr Met Gln Phe Pro Phe Cys Ala Ser Arg Glu Ile Asn His
165 170 175

Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Thr Asp Thr

180	185	190
Ser Ala Tyr Glu Thr Ala Met Tyr Val Cys Cys Ile Met Met Leu Leu		
195	200	205
Ile Pro Phe Ser Val Ile Ser Gly Ser Tyr Thr Arg Ile Leu Ile Thr		
210	215	220
Val Tyr Arg Met Ser Glu Ala Glu Gly Arg Arg Lys Ala Val Ala Thr		
225	230	235
Cys Ser Ser His Met Val Val Val Ser Leu Phe Tyr Gly Ala Ala Met		
245	250	255
Tyr Thr Tyr Val Leu Pro His Ser Tyr His Thr Pro Glu Gln Asp Lys		
260	265	270
Ala Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Leu		
275	280	285
Ile Tyr Ser Leu Arg Asn Lys Asp Val Thr Gly Ala Leu Gln Lys Val		
290	295	300
Val Gly Arg Cys Val Ser Ser Gly Lys Val Thr Thr Phe		
305	310	315

<210> 17
 <211> 939
 <212> DNA
 <213> Homo sapiens

<400> 17
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 atctcacacc ctggccgcct ctgcttgctt atcttcgta tatttttgat ggctgtgtct 120
 tggatatatta cattgatact tctgatccac attgactcct ctctgcatac tcccatgtac 180
 ttctttataa accagctctc actcatagac ttgacatata tttctgtcac tggccccaaa 240
 atgctggta accagctggc caaagacaag accatctcggt tccttgggtg tggcacccag 300
 atgtacttct acctgcagg gggaggtgca gagtgctgcc ttctagccgc catggcctat 360
 gaccgctatg tggctatctg ccattccttc cggtactctg tgctcatgag ccataggta 420
 tggatggctt ctgatggctt tggatggctt catgctcact 480
 cccatcgcca tgagcttccc cttctgcaga tcccatgaga ttcaagactt ctctgtgag 540
 gtccctgtgt ttttgaagct ctctgtcgtca gacacctcac tttacaagat ttcatgtac 600
 ttgtgtgtgt tcatacatgtct cctgataacct gtagacggta ttcaagtgtc ttactactat 660
 atcatcctca ccatccataa gatgaactca gttgagggtc ggaaaaaggc cttcaccacc 720
 tgctcctccc acattacagt ggtcagcctc ttctatggag ctgctattta caactacatg 780
 ctccccagct cctaccaaac tcctgagaaa gatatgtatgt catcctttt ctacactatc 840
 cttacacctg tcttgaatcc tatcattac agttcagga ataaggatgt cacaaggct 900
 ttgaaaaaaaaa tgctgagcgt gcagaaacctt ccatattaa 939

<210> 18
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 18

Met Arg Leu Ala Asn Gln Thr Leu Gly Gly Asp Phe Phe Leu Leu Gly
1 5 10 15

Ile Phe Ser Gln Ile Ser His Pro Gly Arg Leu Cys Leu Leu Ile Phe
20 25 30

Ser Ile Phe Leu Met Ala Val Ser Trp Asn Ile Thr Leu Ile Leu Leu
35 40 45

Ile His Ile Asp Ser Ser Leu His Thr Pro Met Tyr Phe Phe Ile Asn
50 55 60

Gln Leu Ser Leu Ile Asp Leu Thr Tyr Ile Ser Val Thr Val Pro Lys
65 70 75 80

Met Leu Val Asn Gln Leu Ala Lys Asp Lys Thr Ile Ser Val Leu Gly
85 90 95

Cys Gly Thr Gln Met Tyr Phe Tyr Leu Gln Leu Gly Gly Ala Glu Cys
100 105 110

Cys Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125

Pro Leu Arg Tyr Ser Val Leu Met Ser His Arg Val Cys Leu Leu
130 135 140

Ala Ser Gly Cys Trp Phe Val Gly Ser Val Asp Gly Phe Met Leu Thr
145 150 155 160

Pro Ile Ala Met Ser Phe Pro Phe Cys Arg Ser His Glu Ile Gln His
165 170 175

Phe Phe Cys Glu Val Pro Ala Val Leu Lys Leu Ser Cys Ser Asp Thr
180 185 190

Ser Leu Tyr Lys Ile Phe Met Tyr Leu Cys Cys Val Ile Met Leu Leu
195 200 205

Ile Pro Val Thr Val Ile Ser Val Ser Tyr Tyr Tyr Ile Ile Leu Thr
210 215 220

Ile His Lys Met Asn Ser Val Glu Gly Arg Lys Lys Ala Phe Thr Thr
225 230 235 240

Cys Ser Ser His Ile Thr Val Val Ser Leu Phe Tyr Gly Ala Ala Ile
245 250 255

Tyr Asn Tyr Met Leu Pro Ser Ser Tyr Gln Thr Pro Glu Lys Asp Met
260 265 270

Met Ser Ser Phe Phe Tyr Thr Ile Leu Thr Pro Val Leu Asn Pro Ile
275 280 285

Ile Tyr Ser Phe Arg Asn Lys Asp Val Thr Arg Ala Leu Lys Lys Met
290 295 300

Leu Ser Val Gln Lys Pro Pro Tyr
305 310

<210> 19
<211> 948
<212> DNA
<213> Homo sapiens

<400> 19
atggccaaca tcaccaggat ggccaaaccac actggaaggt tggattcat cctcatggga 60
ctcttcagac aatccaaaca tccagctcta cttagtgtgg tcatacttgc ggtttcctg 120
aaggcggtgt ctggaaatgc tgcctgatc ctctgtatc actgtgacgc ccacccac 180
agccccatgt acttttcat cagtcaatttgc tctctcatgg acatggcgta catttctgtc 240
actgtgccca agatgctcct ggaccaggtc atgggtgtga ataaggctc agccctgag 300
tgtggatgc agatgttctt ctatctgaca ctgcaggat cggaaattttt cttcttagcc 360
accatggcct atgaccgcta cgtggccatc tgccatcctc tccgttaccc tgcctcatg 420
aaccataggg tctgtctttt cctggcatcg ggctgctggg tcctgggctc agtggatggc 480
ttcatgctca ctccatcac catgagcttc cccttctgca gatcctggga gattcatcat 540
ttcttctgtg aagtccctgc tgtaacgatc ctgtcctgtc cagacacctc actctatgag 600
accctcatgt acctatgctg tgcctcatg ctccatcctc ctgtgacgat catttcaagc 660
tcctatttac tcatacttgc caccgtccac aggatgaact cagcagaggg ccggaaaaag 720
gccttgcca cctgctcctc ccacctgact gtggctatcc tccttatgg ggctgcccgtc 780
tacacctaca tgctccccag ctccatcac acccctgaga aggacatgat ggtatctgtc 840
ttctatacca tcctcactcc ggtgctgaac cctttaatct atagtcttag gaataaggat 900
gtcatggggg ctctgaagaa aatgttaact gtgagattcg tccttttag 948

<210> 20
<211> 315
<212> PRT
<213> Homo sapiens

<400> 20
Met Ala Asn Ile Thr Arg Met Ala Asn His Thr Gly Arg Leu Asp Phe
1 5 10 15

Ile Leu Met Gly Leu Phe Arg Gln Ser Lys His Pro Ala Leu Leu Ser
20 25 30

Val Val Ile Phe Val Val Phe Leu Lys Ala Leu Ser Gly Asn Ala Val
35 40 45

Leu Ile Leu Leu Ile His Cys Asp Ala His Leu His Ser Pro Met Tyr
50 55 60

Phe Phe Ile Ser Gln Leu Ser Leu Met Asp Met Ala Tyr Ile Ser Val
65 70 75 80

Thr Val Pro Lys Met Leu Leu Asp Gln Val Met Gly Val Asn Lys Val
85 90 95

Ser Ala Pro Glu Cys Gly Met Gln Met Phe Leu Tyr Leu Thr Leu Ala
100 105 110

Gly Ser Glu Phe Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val
115 120 125

Ala Ile Cys His Pro Leu Arg Tyr Pro Val Leu Met Asn His Arg Val
 130 135 140

 Cys Leu Phe Leu Ala Ser Gly Cys Trp Phe Leu Gly Ser Val Asp Gly
 145 150 155 160

 Phe Met Leu Thr Pro Ile Thr Met Ser Phe Pro Phe Cys Arg Ser Trp
 165 170 175

 Glu Ile His His Phe Phe Cys Glu Val Pro Ala Val Thr Ile Leu Ser
 180 185 190

 Cys Ser Asp Thr Ser Leu Tyr Glu Thr Leu Met Tyr Leu Cys Cys Val
 195 200 205

 Leu Met Leu Leu Ile Pro Val Thr Ile Ile Ser Ser Ser Tyr Leu Leu
 210 215 220

 Ile Leu Leu Thr Val His Arg Met Asn Ser Ala Glu Gly Arg Lys Lys
 225 230 235 240

 Ala Phe Ala Thr Cys Ser Ser His Leu Thr Val Val Ile Leu Phe Tyr
 245 250 255

 Gly Ala Ala Val Tyr Thr Tyr Met Leu Pro Ser Ser Tyr His Thr Pro
 260 265 270

 Glu Lys Asp Met Met Val Ser Val Phe Tyr Thr Ile Leu Thr Pro Val
 275 280 285

 Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Met Gly Ala
 290 295 300

 Leu Lys Lys Met Leu Thr Val Arg Phe Val Leu
 305 310 315

<210> 21
 <211> 949
 <212> DNA
 <213> Homo sapiens

<400> 21
 atggccaaca tcaccaggat ggccaaccac actggaaggt tggatttcat cctcatggaa 60
 ctcttcagac aatccaaaca tccagctta cttagtgtgg tcatacgttgt ggttttcctg 120
 aaggcggtgt ctgaaaatgc tgcctgatc cttctgatac actgtgacgc ccaccccac 180
 acccccattgt actttttcat cagtcaattt gtcctcatgg acatggcgta catttctgtc 240
 actgtgccca agatgctctt ggaccaggctc atgggtgtga ataagatctc agccccctgag 300
 tgtggatgc agatgttctt ctatctgaca ctgcgcgtt cggaattttt cttcttagcc 360
 accatggcct atgaccgcta cgtggccatc tgccatcctc tccgttaccc tgcctcatg 420
 aaccataggg tctgtctttt cctggcatcg ggctgctgg tccctgggctc agtggatggc 480
 ttcatgctca ctcccatcac catgagcttc cccttctgca gatcctggga gattcatcat 540
 ttcttctgtg aagtccctgc tgtaacgatc ctgcctgtc cagacacactc actctataag 600
 accctcatgt acctatgctg tgcctcatg ctcctcatcc ctgtgacgat catttcaagc 660
 tccttattac tcatccctt caccatccac aggatgaact cagcagaggg ccggaaaaag 720
 gccttgcga cctgctctc ccacactgact gtggtcatcc tcttctatgg ggctggccgtc 780

tacacctaca tgctccccag ctcctaccac acccctgaga aggacatgtat ggtatctgtc 840
ttctatacca tcctcaactcc ggtgctgaac cctttaatct atagtcttag gaataaggat 900
gtcatggggg ctctgaagaa aatgttaact gtgagattcg tcctttagg 949

<210> 22
<211> 315
<212> PRT
<213> Homo sapiens

<400> 22
Met Ala Asn Ile Thr Arg Met Ala Asn His Thr Gly Arg Leu Asp Phe
1 5 10 15

Ile Leu Met Gly Leu Phe Arg Gln Ser Lys His Pro Ala Leu Leu Ser
20 25 30

Val Val Ile Phe Val Val Phe Leu Lys Ala Leu Ser Glu Asn Ala Val
35 40 45

Leu Ile Leu Leu Ile His Cys Asp Ala His Leu His Thr Pro Met Tyr
50 55 60

Phe Phe Ile Ser Gln Leu Ser Leu Met Asp Met Ala Tyr Ile Ser Val
65 70 75 80

Thr Val Pro Lys Met Leu Leu Asp Gln Val Met Gly Val Asn Lys Ile
85 90 95

Ser Ala Pro Glu Cys Gly Met Gln Met Phe Leu Tyr Leu Thr Leu Ala
100 105 110

Gly Ser Glu Phe Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val
115 120 125

Ala Ile Cys His Pro Leu Arg Tyr Pro Val Leu Met Asn His Arg Val
130 135 140

Cys Leu Phe Leu Ala Ser Gly Cys Trp Phe Leu Gly Ser Val Asp Gly
145 150 155 160

Phe Met Leu Thr Pro Ile Thr Met Ser Phe Pro Phe Cys Arg Ser Trp
165 170 175

Glu Ile His His Phe Phe Cys Glu Val Pro Ala Val Thr Ile Leu Ser
180 185 190

Cys Ser Asp Thr Ser Leu Tyr Lys Thr Leu Met Tyr Leu Cys Cys Val
195 200 205

Leu Met Leu Leu Ile Pro Val Thr Ile Ile Ser Ser Ser Tyr Leu Leu
210 215 220

Ile Leu Leu Thr Ile His Arg Met Asn Ser Ala Glu Gly Arg Lys Lys
225 230 235 240

Ala Phe Ala Thr Cys Ser Ser His Leu Thr Val Val Ile Leu Phe Tyr

245

250

255

Gly Ala Ala Val Tyr Thr Tyr Met Leu Pro Ser Ser Tyr His Thr Pro
260 265 270

Glu Lys Asp Met Met Val Ser Val Phe Tyr Thr Ile Leu Thr Pro Val
275 280 285

Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Met Gly Ala
290 295 300

Leu Lys Lys Met Leu Thr Val Arg Phe Val Leu
305 310 315

<210> 23

<211> 948

<212> DNA

<213> Homo sapiens

<400> 23

atggccaaca tcaccaggat ggccaaccac actggaagg tggatttcat cctcatggg 60
ctttcagac gatccaaaca tccagctcta cttagtgtgg tcatactttgt ggtttcctg 120
aaggcgttgt ctggaaatgc tgcctgtatc ctctgtatc actgtgacgc ccacccac 180
agccccatgt acctttcatc cagtcatttgc tctctcatgg acatggcgta catttctgtc 240
actgtgccca agatgctcct ggaccaggc atgggtgtga ataaggcttc agccctgag 300
tgtggatgc agatgttctt ctatctgaca ctagcaggat cgaaatttt ccttctagcc 360
accatggcct atgaccgcata cgtggccatc tgccatcctc tccggttaccc tgcctcatg 420
aaccataggg tctgtctttt cctggcatcg ggctgctgg tccctggctc agtggatggc 480
ttcatgctca ctccatcac catgagcttc cccttctgca gatcctggga gattcatcat 540
ttcttctgtg aagtccctgc tgtaacgatc ctgtcctgtc cagacacctc actctatgag 600
accctcatgt acctatgctg tgcctcatg ctccatcc ctgtgacgat catttcaagc 660
tcctattttac tcatcttcct caccgtccac aggatgaact cagcagaggg ccggaaaaag 720
gccttgcac cctgtccctc ccacctgact gtggcatcc tcttctatgg ggctgcccgtc 780
tacacctaca tgctccccag ctccatcac acccctgaga aggacatgat ggtatctgtc 840
ttctatacca tcctcaactcc ggtgctgaac ccttaatct atagtcttag gaataaggat 900
gtcatggggg ctctgaagaa aatgttaact gtgagattcg tcctttag 948

<210> 24

<211> 315

<212> PRT

<213> Homo sapiens

<400> 24

Met Ala Asn Ile Thr Arg Met Ala Asn His Thr Gly Arg Leu Asp Phe
1 5 10 15

Ile Leu Met Gly Leu Phe Arg Arg Ser Lys His Pro Ala Leu Leu Ser
20 25 30

Val Val Ile Phe Val Val Phe Leu Lys Ala Leu Ser Gly Asn Ala Val
35 40 45

Leu Ile Leu Leu Ile His Cys Asp Ala His Leu His Ser Pro Met Tyr
50 55 60

Phe	Phe	Ile	Ser	Gln	Leu	Ser	Leu	Met	Asp	Met	Ala	Tyr	Ile	Ser	Val	
65					70						75				80	
Thr	Val	Pro	Lys	Met	Leu	Leu	Asp	Gln	Val	Met	Gly	Val	Asn	Lys	Val	
					85					90					95	
Ser	Ala	Pro	Glu	Cys	Gly	Met	Gln	Met	Phe	Leu	Tyr	Leu	Thr	Leu	Ala	
					100					105					110	
Gly	Ser	Glu	Phe	Phe	Leu	Leu	Ala	Thr	Met	Ala	Tyr	Asp	Arg	Tyr	Val	
					115				120					125		
Ala	Ile	Cys	His	Pro	Leu	Arg	Tyr	Pro	Val	Leu	Met	Asn	His	Arg	Val	
					130				135					140		
Cys	Leu	Phe	Leu	Ala	Ser	Gly	Cys	Trp	Phe	Leu	Gly	Ser	Val	Asp	Gly	
					145				150			155			160	
Phe	Met	Leu	Thr	Pro	Ile	Thr	Met	Ser	Phe	Pro	Phe	Cys	Arg	Ser	Trp	
					165					170					175	
Glu	Ile	His	His	Phe	Phe	Cys	Glu	Val	Pro	Ala	Val	Thr	Ile	Leu	Ser	
					180					185					190	
Cys	Ser	Asp	Thr	Ser	Leu	Tyr	Glu	Thr	Leu	Met	Tyr	Leu	Cys	Cys	Val	
					195				200					205		
Leu	Met	Leu	Leu	Ile	Pro	Val	Thr	Ile	Ile	Ser	Ser	Ser	Tyr	Leu	Leu	
					210				215					220		
Ile	Leu	Leu	Thr	Val	His	Arg	Met	Asn	Ser	Ala	Glu	Gly	Arg	Lys	Lys	
					225				230			235			240	
Ala	Phe	Ala	Thr	Cys	Ser	Ser	His	Leu	Thr	Val	Val	Ile	Leu	Phe	Tyr	
					245					250					255	
Gly	Ala	Ala	Ala	Val	Tyr	Thr	Tyr	Met	Leu	Pro	Ser	Ser	Tyr	His	Thr	Pro
					260					265					270	
Glu	Lys	Asp	Met	Met	Val	Ser	Val	Phe	Tyr	Thr	Ile	Leu	Thr	Pro	Val	
					275				280					285		
Leu	Asn	Pro	Leu	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Met	Gly	Ala	
					290				295					300		
Leu	Lys	Lys	Met	Leu	Thr	Val	Arg	Phe	Val	Leu						
					305				310					315		

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<210> 25  
<211> 951  
<212> DNA  
<213> Homo sapiens
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qccqqqgattq tatttacaqt qatccttqct qttttcttqg qqqccatqac tqcaaatttq 120

gtcatgatat tcttgattca ggtggactct cgcctccaca cccccatgta ctttctgctc 180
 agtcagctgt ccatcatgga caccctttc atctgtacca ctgtcccaa actcctggca 240
 gacatggttt ctaaaagagaa gatcattcc tttgtggcct gtggcatcca gatcttcctc 300
 tacctgacca tgattggttc tgagttctc ctccctggcc tcataggcta tgactgctac 360
 gtggctgtct gtaaccctct gagataccca gcctgtatga accgcaagaa gtgtctttg 420
 ctggctgtgt gtgcctgggtt tgggggctcc ctgcgtggct ttctgctcac tcccatcacc 480
 atgaatgtcc cttactgtgg ctcccgaagt atcaaccatt ttttctgtga gatcccagca 540
 gttctgaaac tggcctgtgc agacacgtcc ttgtatgaaa ctctgtatga catctgctgt 600
 gtcctcatgt tgctcatccc catctctatc atctccactt cctactccct catcttgta 660
 accatccacc gcgcctc tgctgaaggt cgcaaaaagg ccttcaccac ttgttcctcc 720
 cacttgactg tagtagcat cttctatggg gctgccttct acacatacgt gctgccccag 780
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<210> 26

<211> 316

<212> PRT

<213> Homo sapiens

<400> 26

Met	Thr	Asn	Thr	Ser	Ser	Ser	Asp	Phe	Thr	Leu	Leu	Gly	Leu	Leu	Val
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Asn	Ser	Glu	Ala	Ala	Gly	Ile	Val	Phe	Thr	Val	Ile	Leu	Ala	Val	Phe
									25					30	

Leu	Gly	Ala	Val	Thr	Ala	Asn	Leu	Val	Met	Ile	Phe	Leu	Ile	Gln	Val
									35					45	

Asp	Ser	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Leu	Leu	Ser	Gln	Leu	Ser
									50					60	

Ile	Met	Asp	Thr	Leu	Phe	Ile	Cys	Thr	Thr	Val	Pro	Lys	Leu	Leu	Ala
									65					80	

Asp	Met	Val	Ser	Lys	Glu	Lys	Ile	Ile	Ser	Phe	Val	Ala	Cys	Gly	Ile
									85					95	

Gln	Ile	Phe	Leu	Tyr	Leu	Thr	Met	Ile	Gly	Ser	Glu	Phe	Phe	Leu	Leu
									100					110	

Gly	Leu	Met	Ala	Tyr	Asp	Cys	Tyr	Val	Ala	Val	Cys	Asn	Pro	Leu	Arg
									115					125	

Tyr	Pro	Val	Leu	Met	Asn	Arg	Lys	Lys	Cys	Leu	Leu	Ala	Ala	Gly	
									130					140	

Ala	Trp	Phe	Gly	Gly	Ser	Leu	Asp	Gly	Phe	Leu	Leu	Thr	Pro	Ile	Thr
									145					160	

Met	Asn	Val	Pro	Tyr	Cys	Gly	Ser	Arg	Ser	Ile	Asn	His	Phe	Phe	Cys
									165					175	

Glu	Ile	Pro	Ala	Val	Leu	Lys	Leu	Ala	Cys	Ala	Asp	Thr	Ser	Leu	Tyr
									180					190	

Glu Thr Leu Met Tyr Ile Cys Cys Val Leu Met Leu Leu Ile Pro Ile
 195 200 205
 Ser Ile Ile Ser Thr Ser Tyr Ser Leu Ile Leu Leu Thr Ile His Arg
 210 215 220
 Met Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Thr Thr Cys Ser Ser
 225 230 235 240
 His Leu Thr Val Val Ser Ile Phe Tyr Gly Ala Ala Phe Tyr Thr Tyr
 245 250 255
 Val Leu Pro Gln Ser Phe His Thr Pro Glu Gln Asp Lys Val Val Ser
 260 265 270
 Ala Phe Tyr Thr Ile Val Thr Pro Met Leu Asn Pro Leu Ile Tyr Ser
 275 280 285
 Leu Arg Asn Lys Asp Val Ile Gly Ala Phe Lys Lys Val Phe Ala Cys
 290 295 300
 Cys Ser Ser Ala Gln Lys Val Ala Thr Ser Asp Ala
 305 310 315

<210> 27
 <211> 993
 <212> DNA
 <213> Homo sapiens

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 gtcatgatat tcttgattca ggtggactct cgccctccaca cccccatgtt ctttctgctc 180
 agtcagctgt ccacatcatgga cacccttttcc atctgttacca ctgtcccaaa actcctggca 240
 gacatggttt ctaaagagaa gatcatttcc ttttgtggctt gtggcatcca gatcttcctc 300
 tacctgacca tgattggttc tgagtttcc ctcttggggcc tcatggctt tgaccgctac 360
 gtggctgtct gtaaccctct gagataccca gtctgtatga accgcaagaa gtgtctttt 420
 ctggctgtctg gtgcctgggtt tgggggcctt ctcgtggctt ttctgttccac tcccatcacc 480
 atgaatgtcc cttactgtgg ctcccgaagt atcaaccatt ttttctgttga gatcccagca 540
 gttctgaaac tggcctgtgc agacacgtcc ttgtatgaaa ctctgtatgtt catctgtgt 600
 gtccctcatgt tgctcatccc catctctatc atctccactt cctactccct catcttgta 660
 accatccacc gcatgccctc tgctgaaggt cgccaaaaagg ccttcaccac ttgttccctcc 720
 cacttgactg tagtagcat cttctatggg gctgccttct acacatacgt gctgccccag 780
 tccttccaca ccccccggagca ggacaaagta gtgtcagccct tctataccat tgtcacgccc 840
 atgcttaatc ctctcatcta cagcctcaga aacaaggacg tcataggggc atttaaaaag 900
 gtatttgcat gttgctcatc tgctcgaaaa gtagcaacaa gtgatgctt gagagtcact 960
 gcccagagga taaggcttcc taaggacttc ctc 993

<210> 28
 <211> 316
 <212> PRT
 <213> Homo sapiens

<400> 28

Met Thr Asn Thr Ser Ser Asp Phe Thr Leu Leu Gly Leu Leu Val
1 5 10 15

Asn Ser Glu Ala Ala Gly Ile Val Phe Thr Val Ile Leu Ala Val Phe
20 25 30

Leu Gly Ala Val Thr Ala Asn Leu Val Met Ile Phe Leu Ile Gln Val
35 40 45

Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser Gln Leu Ser
50 55 60

Ile Met Asp Thr Leu Phe Ile Cys Thr Thr Val Pro Lys Leu Leu Ala
65 70 75 80

Asp Met Val Ser Lys Glu Lys Ile Ile Ser Phe Val Ala Cys Gly Ile
85 90 95

Gln Ile Phe Leu Tyr Leu Thr Met Ile Gly Ser Glu Phe Phe Leu Leu
100 105 110

Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Val Cys Asn Pro Leu Arg
115 120 125

Tyr Pro Val Leu Met Asn Arg Lys Lys Cys Leu Leu Ala Ala Gly
130 135 140

Ala Trp Phe Gly Gly Ser Leu Asp Gly Phe Leu Leu Thr Pro Ile Thr
145 150 155 160

Met Asn Val Pro Tyr Cys Gly Ser Arg Ser Ile Asn His Phe Phe Cys
165 170 175

Glu Ile Pro Ala Val Leu Lys Leu Ala Cys Ala Asp Thr Ser Leu Tyr
180 185 190

Glu Thr Leu Met Tyr Ile Cys Cys Val Leu Met Leu Leu Ile Pro Ile
195 200 205

Ser Ile Ile Ser Thr Ser Tyr Ser Leu Ile Leu Leu Thr Ile His Arg
210 215 220

Met Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Thr Thr Cys Ser Ser
225 230 235 240

His Leu Thr Val Val Ser Ile Phe Tyr Gly Ala Ala Phe Tyr Thr Tyr
245 250 255

Val Leu Pro Gln Ser Phe His Thr Pro Glu Gln Asp Lys Val Val Ser
260 265 270

Ala Phe Tyr Thr Ile Val Thr Pro Met Leu Asn Pro Leu Ile Tyr Ser
275 280 285

Leu Arg Asn Lys Asp Val Ile Gly Ala Phe Lys Lys Val Phe Ala Cys
290 295 300

Cys Ser Ser Ala Arg Lys Val Ala Thr Ser Asp Ala
305 310 315

<210> 29
<211> 984
<212> DNA
<213> Homo sapiens

<400> 29
acatcatcct ctgacttcac ctcctgggg cttctggta acagtgggc tgccggatt 60
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ttcttgattc aggtggactc tcgcctccac acccccattt actttctgct cagtcagctg 180
tccatcatgg acacccttt catctgtacc actgtcccaa aactcctggc agacatggtt 240
tctaaagaga agatcattc ctttgtggc tggatccatcc agatcttcctt ctacctgacc 300
atgattggtt ctgagttctt ctcctgggc ctcatggct atgaccgcta cgtggctgtc 360
tgtaaccctc tgagataccc agtcctgtatg aaccgcaaga agtgtctttt gctggctgct 420
ggtcctggt ttgggggctc ctcgtatggc tttctgtca ctcccatcac catgaatgtc 480
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ctggcctgtg cagacacgtc cttgtatgaa actctgtatgt acatctgtg tggctcatg 600
ttgctcatcc ccatcttat catctccact tcctactccc tcacatctt aaccatccac 660
cgcatgcctt ctgctgaagg tcgaaaaag gccttcacca ctgttcctc ccacttgact 720
gtagtttagca tcttctatgg ggctgcctt tacacatacg tgctgccccca gtccctccac 780
accccccggc aggacaaaagt agtgtcagcc ttctatacca ttgtcaacgcc catgcttaat 840
cctctcatct acgcctcag aaacaaggac gtcatagggg catttaaaaaa ggtatttgca 900
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ataaggcttc ctaaggactt ctc 984

<210> 30
<211> 275
<212> PRT
<213> Homo sapiens

<400> 30
Met Ile Phe Leu Ile Gln Val Asp Ser Arg Leu His Thr Pro Met Tyr
1 5 10 15

Phe Leu Leu Ser Gln Leu Ser Ile Met Asp Thr Leu Phe Ile Cys Thr
20 25 30

Thr Val Pro Lys Leu Leu Ala Asp Met Val Ser Lys Glu Lys Ile Ile
35 40 45

Ser Phe Val Ala Cys Gly Ile Gln Ile Phe Leu Tyr Leu Thr Met Ile
50 55 60

Gly Ser Glu Phe Phe Leu Leu Gly Leu Met Ala Tyr Asp Arg Tyr Val
65 70 75 80

Ala Val Cys Asn Pro Leu Arg Tyr Pro Val Leu Met Asn Arg Lys Lys
85 90 95

Cys Leu Leu Leu Ala Ala Gly Ala Trp Phe Gly Gly Ser Leu Asp Gly
100 105 110

Phe Leu Leu Thr Pro Ile Thr Met Asn Val Pro Tyr Cys Gly Ser Arg

115

120

125

Ser Ile Asn His Phe Phe Cys Glu Ile Pro Ala Val Leu Lys Leu Ala
130 135 140

Cys Ala Asp Thr Ser Leu Tyr Glu Thr Leu Met Tyr Ile Cys Cys Val
145 150 155 160

Leu Met Leu Leu Ile Pro Ile Ser Ile Ile Ser Thr Ser Tyr Ser Leu
165 170 175

Ile Leu Leu Thr Ile His Arg Met Pro Ser Ala Glu Gly Arg Lys Lys
180 185 190

Ala Phe Thr Thr Cys Ser Ser His Leu Thr Val Val Ser Ile Phe Tyr
195 200 205

Gly Ala Ala Phe Tyr Thr Tyr Val Leu Pro Gln Ser Phe His Thr Pro
210 215 220

Glu Gln Asp Lys Val Val Ser Ala Phe Tyr Thr Ile Val Thr Pro Met
225 230 235 240

Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Ile Gly Ala
245 250 255

Phe Lys Lys Val Phe Ala Cys Cys Ser Ser Ala Arg Lys Val Ala Thr
260 265 270

Ser Asp Ala
275

<210> 31
<211> 958
<212> DNA
<213> Homo sapiens

<400> 31
ctatggagca gagcaattat tccgtgtatg ccgactttat ccttctgggt ttgttcagca 60
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ccagcaacgt ggtcatgatc attctcatcc acatagactc ccgcctccac acccccattgt 180
acttcctgtct cagccagtc tccctcaggg acatcttgta tatttccacc atttgtgcc 240
aaatgctgggt cgaccagggtg atgagccaga gagccatttc ctttgctgga tgcaactgccc 300
aacacttctt ctacttgacc ttagcagggg ctgagttctt cttccttagga ctcatgtcct 360
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tctgctggtt gattgtggcg gcagcctggc tggaggggtc tatcgatggt ttcttgctca 480
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cctgctcttc acacatggtg gttgtcagcc tcttctatgg ggctgccatg tacacatacg 780
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ccctacagaa ggttgttggg aggtgtgtgt cctcaggaaa ggtaaccact ttctaaac 958

<210> 32
<211> 317
<212> PRT
<213> Homo sapiens

<400> 32
Met Glu Gln Ser Asn Tyr Ser Val Tyr Ala Asp Phe Ile Leu Leu Gly
1 5 10 15

Leu Phe Ser Asn Ala Arg Phe Pro Trp Leu Leu Phe Ala Leu Ile Leu
20 25 30

Leu Val Phe Val Thr Ser Ile Ala Ser Asn Val Val Met Ile Ile Leu
35 40 45

Ile His Ile Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser
50 55 60

Gln Leu Ser Leu Arg Asp Ile Leu Tyr Ile Ser Thr Ile Val Pro Lys
65 70 75 80

Met Leu Val Asp Gln Val Met Ser Gln Arg Ala Ile Ser Phe Ala Gly
85 90 95

Cys Thr Ala Gln His Phe Leu Tyr Leu Thr Leu Ala Gly Ala Glu Phe
100 105 110

Phe Leu Leu Gly Leu Met Ser Cys Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu His Tyr Pro Asp Leu Met Ser Arg Lys Ile Cys Trp Leu Ile
130 135 140

Val Ala Ala Ala Trp Leu Gly Gly Ser Ile Asp Gly Phe Leu Leu Thr
145 150 155 160

Pro Val Thr Met Gln Phe Pro Phe Cys Ala Ser Arg Glu Ile Asn His
165 170 175

Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Thr Asp Thr
180 185 190

Ser Ala Tyr Glu Thr Ala Met Tyr Val Cys Cys Ile Met Met Leu Leu
195 200 205

Ile Pro Phe Ser Val Ile Ser Gly Ser Tyr Thr Arg Ile Leu Ile Thr
210 215 220

Val Tyr Arg Met Ser Glu Ala Glu Gly Arg Arg Lys Ala Val Ala Thr
225 230 235 240

Cys Ser Ser His Met Val Val Ser Leu Phe Tyr Gly Ala Ala Met
245 250 255

Tyr Thr Tyr Val Leu Pro His Ser Tyr His Thr Pro Glu Gln Asp Lys
260 265 270

Ala Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Thr Gly Ala Leu Gln Lys Val
290 295 300

Val Gly Arg Cys Val Ser Ser Gly Lys Val Thr Thr Phe
305 310 315

<210> 33

<211> 958

<212> DNA

<213> Homo sapiens

<400> 33

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ccagcaacgt ggtcatgatc attctcatcc acatagactc ccgcctccac acccccattgt 180
acttcctgtc cagccagctc tccctcaggg acatcttgcata tatttccacc atttgtgccca 240
aaatgctggt cgaccagggtg atgagccaga gagccatttc ctttgctgga tgcaactgccc 300
aacacttctt ctagttgacc ttagcagggg ctgagttctt cctccttagga ctcatgtcct 360
gtgatcgcta cgttagccatc tgcaaccctc tgcaactatcc tgacctcatg agccgcaaga 420
tctgctgggtt gattgtggcg gcagcctggc tgggagggtc tatcgatggt ttcttgctca 480
cccccgta catcgagtcc cccttctgtg cctctcgaaa gatcaaccac ttcttctgctg 540
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atgtctgtc tattatgtat ctcctcatcc ctttctctgt gatctcgggc tcttacacaa 660
gaattctcat tactgttat aggatgagcg aggagaggg gaggcggaaag gctgtggcca 720
cctgctcctc acacatgggt gttgtcagcc tcttctatgg ggctgcccatt tacacatacg 780
tgctgcctca ttcttaccac acccctgagc aggacaaagc tgtatctgccc ttctacacca 840
tcctcactcc catgctcaat ccactcatcc acagccttag gaacaaggat gtcacggggg 900
ccctacagaa ggttggggg aggtgtgtt cctcaggaaa ggtaaccact ttctaaac 958

<210> 34

<211> 317

<212> PRT

<213> Homo sapiens

<400> 34

Met Glu Gln Ser Asn Tyr Ser Val Tyr Ala Asp Phe Ile Leu Leu Gly
1 5 10 15

Leu Phe Ser Asn Ala Arg Phe Pro Trp Leu Leu Phe Ala Leu Ile Leu
20 25 30

Leu Val Phe Val Thr Ser Ile Ala Ser Asn Val Val Met Ile Ile Leu
35 40 45

Ile His Ile Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser
50 55 60

Gln Leu Ser Leu Arg Asp Ile Leu Tyr Ile Ser Thr Ile Val Pro Lys
65 70 75 80

Met Leu Val Asp Gln Val Met Ser Gln Arg Ala Ile Ser Phe Ala Gly
85 90 95

Cys Thr Ala Gln His Phe Leu Tyr Leu Thr Leu Ala Gly Ala Glu Phe
100 105 110

Phe Leu Leu Gly Leu Met Ser Cys Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu His Tyr Pro Asp Leu Met Ser Arg Lys Ile Cys Trp Leu Ile
130 135 140

Val Ala Ala Ala Trp Leu Gly Gly Ser Ile Asp Gly Phe Leu Leu Thr
145 150 155 160

Pro Val Thr Met Gln Phe Pro Phe Cys Ala Ser Arg Glu Ile Asn His
165 170 175

Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Thr Asp Thr
180 185 190

Ser Ala Tyr Glu Thr Ala Met Tyr Val Cys Cys Ile Met Met Leu Leu
195 200 205

Ile Pro Phe Ser Val Ile Ser Gly Ser Tyr Thr Arg Ile Leu Ile Thr
210 215 220

Val Tyr Arg Met Ser Glu Ala Glu Gly Arg Arg Lys Ala Val Ala Thr
225 230 235 240

Cys Ser Ser His Met Val Val Val Ser Leu Phe Tyr Gly Ala Ala Met
245 250 255

Tyr Thr Tyr Val Leu Pro His Ser Tyr His Thr Pro Glu Gln Asp Lys
260 265 270

Ala Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Thr Gly Ala Leu Gln Lys Val
290 295 300

Val Gly Arg Cys Val Ser Ser Gly Lys Val Thr Thr Phe
305 310 315

<210> 35

<211> 938

<212> DNA

<213> Homo sapiens

<400> 35

aacatggaaa gcaatcagac ctggatcaca gaagtcatcc ttttggatt ccagggtggac 60
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ggaaatggga ttatccctgg gctcatctac ttggactcta gactgcacac acccatgtat 180
gttttcctgt cacacctggc cattgtggac atgtcctatg cctcgagttac tgcccttaag 240
atgcttagcaa atcttgtat gcacaaaaaa gtcatctcct ttgtcccttg catacttcag 300
acttttttgtt atttggcggtt tgctattaca gagtgtctga ttttggat gatgtgctat 360
gatcggtatg tggcaatctg tcacccttg caatacaccc tcattatgaa ctggagatg 420

tgcactgtcc tggcctcaac ttgctggata ttagcttgc tcttggtct ggtccatatt 480
actcttattc tgaggctgcc ttttggc ccacaaaaga tcaaccactt tttctgtcaa 540
atcatgtccg tattcaaatt gcctgtgc gacactaggc tcaaccaggt ggtcctattt 600
gcgggttcg cgttcatctt agtggggccg ctctgcctgg tgctggctc ctacttgcac 660
atcctggtgg ccatctttag gatccagtct ggggaggccc gcagaaaggc cttcttacc 720
tgctcctccc acctctgcgt ggtggggct ttcttggca gcgccattgt catgtacatg 780
gcccccaagt caaaccattc tcaagaacgg aggaagatcc tttccctgtt ttacagcctt 840
ttcaacccga tcctgaaccc cctcatctac agccttagga atgcagaggt gaaaggggct 900
ctaaagagag tcctttggaa acagagatca atgtgaag 938

<210> 36

<211> 310

<212> PRT

<213> Homo sapiens

<400> 36

Met Glu Ser Asn Gln Thr Trp Ile Thr Glu Val Ile Leu Leu Gly Phe
1 5 10 15

Gln Val Asp Pro Ala Leu Glu Leu Phe Leu Phe Gly Phe Phe Leu Leu
20 25 30

Phe Tyr Ser Leu Thr Leu Met Gly Asn Gly Ile Ile Leu Gly Leu Ile
35 40 45

Tyr Leu Asp Ser Arg Leu His Thr Pro Met Tyr Val Phe Leu Ser His
50 55 60

Leu Ala Ile Val Asp Met Ser Tyr Ala Ser Ser Thr Val Pro Lys Met
65 70 75 80

Leu Ala Asn Leu Val Met His Lys Lys Val Ile Ser Phe Ala Pro Cys
85 90 95

Ile Leu Gln Thr Phe Leu Tyr Leu Ala Phe Ala Ile Thr Glu Cys Leu
100 105 110

Ile Leu Val Met Met Cys Tyr Asp Arg Tyr Val Ala Ile Cys His Pro
115 120 125

Leu Gln Tyr Thr Leu Ile Met Asn Trp Arg Val Cys Thr Val Leu Ala
130 135 140

Ser Thr Cys Trp Ile Phe Ser Phe Leu Leu Ala Leu Val His Ile Thr
145 150 155 160

Leu Ile Leu Arg Leu Pro Phe Cys Gly Pro Gln Lys Ile Asn His Phe
165 170 175

Phe Cys Gln Ile Met Ser Val Phe Lys Leu Ala Cys Ala Asp Thr Arg
180 185 190

Leu Asn Gln Val Val Leu Phe Ala Gly Ser Ala Phe Ile Leu Val Gly
195 200 205

Pro Leu Cys Leu Val Leu Val Ser Tyr Leu His Ile Leu Val Ala Ile

210

215

220

Leu Arg Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys
225 230 235 240

Ser Ser His Leu Cys Val Val Gly Leu Phe Phe Gly Ser Ala Ile Val
245 250 255

Met Tyr Met Ala Pro Lys Ser Asn His Ser Gln Glu Arg Arg Lys Ile
260 265 270

Leu Ser Leu Phe Tyr Ser Leu Phe Asn Pro Ile Leu Asn Pro Leu Ile
275 280 285

Tyr Ser Leu Arg Asn Ala Glu Val Lys Gly Ala Leu Lys Arg Val Leu
290 295 300

Trp Lys Gln Arg Ser Met
305 310

<210> 37

<211> 940

<212> DNA

<213> Homo sapiens

<400> 37

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gggaaatggg accatcctgg ggctcatctc actggactcc agactccaca cccccatgtta 180
cttcttcctc tcacacctgg ctgtcgtaa catcgccatgc gcctgcaaca cagtgcggca 240
gatgctggcg aacctcctgc atccagccaa gcccatactcc tttgctggct gcatgacgca 300
gacctttctc ttttgagtt ttggacacag cgaatgtctc ctgctgggtgc tgatgtccta 360
cgatcggtac gtggccatct gccaccctct ccgatatttc atcatcatga cctggaaagt 420
ctgcatcact ctggccatca cttectggac gtgtggctcc ctccctggctc tggccatgt 480
ggttctcatc ctaagactgc cttctgtgg gcctcatgaa atcaaccact tcttctgtga 540
aatcctgtct gtcctcaggc tggcctgtgc tgatacctgg ctcaaccagg tggtcatctt 600
tgcagcctgc atgttcttcc tggtgggacc acccagcctg gtgcttgtct cctactcgca 660
catcctggcg gccatcctga ggatccagtc tggggagggc cgccagaaagg ccttctccac 720
ctgctcctcc cacctctgcg tagtggact cttcttggc agcgccatcg tcatgtacat 780
ggcccttaag tcccgccatc ctgaggagca gcagaaggctc ctttttcttat ttacagttc 840
tttcaaccca acacttaacc ccctgattta caacctgagg aatgttagagg tcaagggtgc 900
cctgaggaga gcactgtgca aggaaagtca ttccctaagag 940

<210> 38

<211> 310

<212> PRT

<213> Homo sapiens

<400> 38

Met Gly Glu Asn Gln Thr Met Val Thr Glu Phe Leu Leu Leu Gly Phe
1 5 10 15

Leu Leu Gly Pro Arg Ile Gln Met Leu Leu Phe Gly Leu Phe Ser Leu
20 25 30

Phe Tyr Ile Phe Thr Leu Leu Gly Asn Gly Thr Ile Leu Gly Leu Ile
 35 40 45

 Ser Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser His
 50 55 60

 Leu Ala Val Val Asn Ile Ala Tyr Ala Cys Asn Thr Val Pro Gln Met
 65 70 75 80

 Leu Ala Asn Leu Leu His Pro Ala Lys Pro Ile Ser Phe Ala Gly Cys
 85 90 95

 Met Thr Gln Thr Phe Leu Phe Leu Ser Phe Gly His Ser Glu Cys Leu
 100 105 110

 Leu Leu Val Leu Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys His Pro
 115 120 125

 Leu Arg Tyr Phe Ile Ile Met Thr Trp Lys Val Cys Ile Thr Leu Ala
 130 135 140

 Ile Thr Ser Trp Thr Cys Gly Ser Leu Leu Ala Leu Val His Val Val
 145 150 155 160

 Leu Ile Leu Arg Leu Pro Phe Cys Gly Pro His Glu Ile Asn His Phe
 165 170 175

 Phe Cys Glu Ile Leu Ser Val Leu Arg Leu Ala Cys Ala Asp Thr Trp
 180 185 190

 Leu Asn Gln Val Val Ile Phe Ala Ala Cys Met Phe Phe Leu Val Gly
 195 200 205

 Pro Pro Ser Leu Val Leu Val Ser Tyr Ser His Ile Leu Ala Ala Ile
 210 215 220

 Leu Arg Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys
 225 230 235 240

 Ser Ser His Leu Cys Val Val Gly Leu Phe Phe Gly Ser Ala Ile Val
 245 250 255

 Met Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys Val
 260 265 270

 Leu Phe Leu Phe Tyr Ser Ser Phe Asn Pro Thr Leu Asn Pro Leu Ile
 275 280 285

 Tyr Asn Leu Arg Asn Val Glu Val Lys Gly Ala Leu Arg Arg Ala Leu
 290 295 300

 Cys Lys Glu Ser His Ser
 305 310

<210> 39
 <211> 312

<212> PRT

<213> Mus musculus

<400> 39

Met Glu Pro Ser Asn Arg Thr Ala Val Ser Glu Phe Val Leu Lys Gly
1 5 10 15

Phe Ser Gly Tyr Pro Ala Leu Glu Arg Leu Leu Phe Pro Leu Cys Ser
20 25 30

Val Met Tyr Leu Val Thr Leu Leu Gly Asn Thr Ala Ile Val Ala Val
35 40 45

Ser Met Leu Asp Ala Arg Leu His Thr Pro Met Tyr Phe Phe Leu Gly
50 55 60

Asn Leu Ser Ile Leu Asp Ile Cys Tyr Thr Ser Thr Phe Val Pro Leu
65 70 75 80

Met Leu Val His Leu Leu Ser Ser Arg Lys Thr Ile Ser Phe Thr Gly
85 90 95

Cys Ala Val Gln Met Cys Leu Ser Leu Ser Thr Gly Ser Thr Glu Cys
100 105 110

Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Gln
115 120 125

Pro Leu Arg Tyr Pro Val Leu Met Ser His Arg Leu Cys Leu Met Leu
130 135 140

Ala Gly Ala Ser Trp Val Leu Cys Leu Phe Lys Ser Val Ala Glu Thr
145 150 155 160

Val Ile Ala Met Arg Leu Pro Phe Cys Gly His His Val Ile Arg His
165 170 175

Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Thr Cys Gly Asp Thr
180 185 190

Ser Val Ser Asp Ala Phe Leu Leu Val Gly Ala Ile Leu Leu Pro
195 200 205

Ile Pro Leu Thr Leu Ile Cys Leu Ser Tyr Met Leu Ile Leu Ala Thr
210 215 220

Ile Leu Arg Val Pro Ser Ala Thr Gly Arg Ser Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ala His Leu Ala Val Val Leu Leu Phe Tyr Ser Thr Ile Ile
245 250 255

Phe Met Tyr Met Lys Pro Lys Ser Lys Glu Ala Arg Ile Ser Asp Gln
260 265 270

Val Phe Thr Val Leu Tyr Ala Val Val Thr Pro Met Leu Asn Pro Ile
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Ala Arg Lys Ala
290 295 300

Trp Gly Ser Arg Trp Ala Cys Arg
305 310

<210> 40
<211> 315
<212> PRT
<213> Mus musculus

<400> 40
Met Ala Gly Thr Asn His Thr Glu Val Ile Glu Tyr Val Leu Leu Gly
1 5 10 15

Leu Gln Asp His His Gly Leu Glu Ile Ala Leu Phe Val Leu Cys Leu
20 25 30

Gly Ile Tyr Cys Met Thr Leu Leu Gly Asn Ser Phe Leu Val Gly Leu
35 40 45

Ile Val Leu Asp Thr His Leu His Ser Pro Met Tyr Phe Phe Ile Ser
50 55 60

Asn Leu Ser Leu Ile Asp Ile Cys Gly Thr Ser Ser Phe Thr Pro Met
65 70 75 80

Met Leu Leu Asn Phe Leu Asp Val Gln Arg Thr Ile Ser Phe Pro Ser
85 90 95

Cys Ala Leu Gln Met Tyr Leu Thr Leu Ala Leu Gly Thr Thr Glu Cys
100 105 110

Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Gln
115 120 125

Pro Leu Arg Tyr Pro Glu Leu Val Asn Gly Arg Tyr Ala Ser Arg Trp
130 135 140

Gln Asp Lys Leu Gly Thr Gly Phe Ala Asn Ser Leu Leu His Ser Ile
145 150 155 160

Leu Val Trp His Leu Pro Phe Cys Gly His Tyr Ile Ile Asn His Phe
165 170 175

Phe Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Gly Asp Ile Ser
180 185 190

Leu Asn Ala Leu Ile Leu Thr Val Ala Thr Ala Val Leu Thr Met Thr
195 200 205

Pro Leu Leu Leu Ile Cys Leu Ser Tyr Ile Phe Ile Leu Ala Ala Ile
210 215 220

Leu Arg Val Pro Ser Ala Ala Gly Arg Ser Lys Ala Phe Ser Thr Cys

225	230	235	240
Ser Ala His Leu Thr Val Val Val Ile Phe Tyr Gly Thr Ile Thr Phe			
245		250	255
Met Tyr Leu Lys Pro Lys Asp Gln Asp Pro Ser Val Gly Lys Ile Ile			
260		265	270
Thr Leu Leu Tyr Ala Ile Val Ala Pro Ser Leu Asn Ala Phe Ile Tyr			
275	280		285
Ser Leu Arg Asn Ser Glu Val Lys Ala Ala Val Thr Ala Leu Leu Trp			
290	295		300
Gly Gly Leu Leu Thr Arg Lys Met Ser His Phe			
305	310		315
<210> 41			
<211> 318			
<212> PRT			
<213> Mus musculus			
<400> 41			
Met Glu Gly Ala Asn Gln Ser Thr Val Ala Glu Phe Val Leu Leu Gly			
1	5	10	15
Leu Ser Asp His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile Leu			
20		25	30
Leu Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu Val			
35		40	45
Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Gly			
50	55		60
Asp Leu Ser Phe Leu Asp Ile Cys Tyr Thr Ser Ser Ile Pro Leu			
65	70	75	80
Val Leu Asp Gly Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser Gly			
85		90	95
Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu Cys			
100		105	110
Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn			
115	120		125
Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ser Ala Tyr Val Pro Met			
130	135	140	
Ala Val Ser Ser Trp Val Ala Gly Gly Ala Asn Ser Leu Val Gln Ile			
145	150	155	160
Ser Leu Ala Val Gln Leu Pro Phe Cys Gly Asp Asn Val Ile Asn His			
165	170		175

Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Ile
180 185 190

Ser Ile Asn Val Ile Ser Met Gly Val Ala Asn Val Ile Phe Leu Gly
195 200 205

Val Pro Val Leu Phe Ile Phe Val Ser Tyr Ile Phe Ile Leu Ser Thr
210 215 220

Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ala His Leu Thr Val Val Leu Val Phe Tyr Gly Thr Ile Leu
245 250 255

Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp Lys
260 265 270

Gln Asp Val Ser Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Leu Thr
275 280 285

Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
290 295 300

Ala Ala Val Arg Asn Leu Val Gly Gln Lys Cys Leu Ile Gln
305 310 315

<210> 42

<211> 318

<212> PRT

<213> Mus musculus

<400> 42

Met Asp Val Ser Asn Gln Thr Thr Val Thr Glu Phe Val Leu Leu Gly
1 5 10 15

Leu Ser Ala His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile Leu
20 25 30

Ser Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu Val
35 40 45

Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
50 55 60

Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Val Pro Leu
65 70 75 80

Val Leu Asp Gly Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser Gly
85 90 95

Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu Cys
100 105 110

Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ala Ala Tyr Val Pro Met
130 135 140

Ala Val Ser Ser Trp Val Ala Gly Gly Ala Asn Ser Leu Val Gln Ile
145 150 155 160

Ser Leu Ala Val Gln Leu Pro Phe Cys Gly Asp Asn Val Ile Asn His
165 170 175

Phe Ile Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Ile
180 185 190

Ser Ile Asn Val Ile Ser Met Gly Val Ala Asn Val Ile Phe Leu Gly
195 200 205

Val Pro Val Leu Phe Ile Phe Val Ser Tyr Ile Phe Ile Leu Ser Thr
210 215 220

Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Leu
245 250 255

Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp Lys
260 265 270

Gln Asp Leu Ala Asp Lys Leu Ile Ser Leu Phe Tyr Gly Leu Leu Thr
275 280 285

Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
290 295 300

Ala Ala Val Arg Asn Leu Ala Ser His Arg Cys Leu Thr Phe
305 310 315

<210> 43

<211> 319

<212> PRT

<213> Mus musculus

<400> 43

Met Asp Arg Ser Asn Glu Thr Ala Pro Leu Ser Gly Phe Ile Leu Leu
1 5 10 15

Gly Leu Ser Ala His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile
20 25 30

Leu Met Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu
35 40 45

Val Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
50 55 60

Gly Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Ser Ser Val Pro

65

70

75

80

Leu Ile Leu Asp Ser Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser
85 90 95

Gly Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu
100 105 110

Cys Val Leu Leu Ser Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys
115 120 125

Asn Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ala Ala Tyr Val Pro
130 135 140

Met Ala Ala Ser Ser Trp Ala Gly Gly Ile Thr Asn Ser Val Val Gln
145 150 155 160

Thr Ser Leu Ala Met Arg Leu Pro Phe Cys Gly Asp Asn Val Ile Asn
165 170 175

His Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp
180 185 190

Ile Ser Ile Asn Val Ile Ser Met Val Val Ala Asn Met Ile Phe Leu
195 200 205

Ala Val Pro Val Leu Phe Ile Phe Val Ser Tyr Val Phe Ile Leu Val
210 215 220

Thr Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser
225 230 235 240

Thr Cys Ser Ala His Leu Thr Val Val Leu Val Phe Tyr Gly Thr Ile
245 250 255

Leu Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp
260 265 270

Lys Gln Asp Leu Ala Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Val
275 280 285

Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val
290 295 300

Arg Ala Ala Val Arg Asn Leu Val Gly Gln Lys His Leu Thr Glu
305 310 315

<210> 44

<211> 313

<212> PRT

<213> Rattus norvegicus

<400> 44

Met Ser Val Ala Asn Glu Ser Ile Ser Arg Glu Phe Ile Leu Leu Gly
1 5 10 15

Phe	Ser	Asp	Pro	Trp	Leu	Glu	Leu	Pro	Leu	Phe	Val	Val	Phe	Leu			
20														30			
Val	Ser	Tyr	Ile	Leu	Thr	Ile	Phe	Gly	Asn	Met	Met	Ile	Ile	Leu	Val		
														35	45		
Ser	Arg	Leu	Asp	Ser	Lys	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Thr		
														50	55	60	
Asn	Leu	Ser	Leu	Leu	Asp	Leu	Cys	Tyr	Thr	Thr	Ser	Thr	Val	Pro	Gln		
														65	70	75	80
Met	Leu	Ile	Asn	Ile	Cys	Ser	Thr	Arg	Lys	Val	Ile	Ser	Tyr	Gly	Gly		
														85	90	95	
Cys	Val	Val	Gln	Leu	Phe	Ile	Phe	Leu	Ser	Leu	Gly	Ser	Thr	Glu	Cys		
														100	105	110	
Phe	Leu	Leu	Gly	Val	Met	Ser	Leu	Asp	Arg	Phe	Leu	Ala	Ile	Cys	Arg		
														115	120	125	
Pro	Leu	His	Tyr	Ser	Val	Ile	Met	His	Gln	Arg	Arg	Cys	Leu	His	Leu		
														130	135	140	
Ala	Ala	Ala	Cys	Trp	Ile	Ser	Gly	Phe	Ser	Asn	Ser	Val	Leu	Gln	Ser		
														145	150	155	160
Thr	Trp	Thr	Leu	Gln	Met	Pro	Leu	Cys	Gly	His	Lys	Glu	Val	Asp	His		
														165	170	175	
Phe	Phe	Cys	Glu	Val	Pro	Ala	Leu	Leu	Lys	Leu	Ser	Cys	Val	Asp	Thr		
														180	185	190	
Thr	Ala	Asn	Glu	Ala	Glu	Leu	Phe	Phe	Ile	Ser	Val	Leu	Phe	Leu	Leu		
														195	200	205	
Ile	Pro	Val	Thr	Leu	Ile	Leu	Ile	Ser	Tyr	Ala	Phe	Ile	Val	Gln	Ala		
														210	215	220	
Val	Leu	Lys	Ile	Arg	Ser	Ala	Glu	Cys	Arg	Arg	Lys	Ala	Phe	Gly	Thr		
														225	230	235	240
Cys	Gly	Ser	His	Leu	Ile	Val	Val	Val	Leu	Phe	Tyr	Gly	Thr	Ala	Ile		
														245	250	255	
Tyr	Met	Tyr	Leu	Gln	Pro	Pro	Ser	Pro	Ser	Ser	Lys	Asp	Arg	Gly	Lys		
														260	265	270	
Met	Val	Ser	Leu	Phe	Tyr	Gly	Ile	Ile	Thr	Pro	Met	Leu	Asn	Pro	Leu		
														275	280	285	
Ile	Tyr	Thr	Leu	Arg	Asn	Glu	Glu	Val	Lys	Gly	Ala	Phe	Lys	Arg	Leu		
														290	295	300	
Met	Lys	Arg	Ile	Ile	Leu	Ile	Gly	Lys									
														305	310		

<210> 45
<211> 316
<212> PRT
<213> Homo sapiens

<400> 45
Met Asp Asn Gln Ser Ser Thr Pro Gly Phe Leu Leu Leu Gly Phe Ser
1 5 10 15

Glu His Pro Gly Leu Glu Arg Thr Leu Phe Val Val Val Phe Thr Ser
20 25 30

Tyr Leu Leu Thr Leu Val Gly Asn Thr Leu Ile Ile Leu Leu Ser Ala
35 40 45

Leu Asp Pro Lys Leu His Ser Pro Met Tyr Phe Phe Leu Ser Asn Leu
50 55 60

Ser Phe Leu Asp Leu Cys Phe Thr Thr Ser Cys Val Pro Gln Met Leu
65 70 75 80

Val Asn Leu Trp Gly Pro Lys Lys Thr Ile Ser Phe Leu Asp Cys Ser
85 90 95

Val Gln Ile Phe Ile Phe Leu Ser Leu Gly Thr Thr Glu Cys Ile Leu
100 105 110

Leu Thr Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Gln Pro Leu
115 120 125

His Tyr Ala Thr Ile Ile His Pro Arg Leu Cys Trp Gln Leu Ala Ser
130 135 140

Val Ala Trp Val Ile Gly Leu Val Glu Ser Val Val Gln Thr Pro Ser
145 150 155 160

Thr Leu His Leu Pro Phe Cys Pro Asp Arg Gln Val Asp Asp Phe Val
165 170 175

Cys Glu Val Pro Ala Leu Ile Arg Leu Ser Cys Glu Asp Thr Ser Tyr
180 185 190

Asn Glu Ile Gln Val Ala Val Ala Ser Val Phe Ile Leu Val Val Pro
195 200 205

Leu Ser Leu Ile Leu Val Ser Tyr Gly Ala Ile Thr Trp Ala Val Leu
210 215 220

Arg Ile Asn Ser Ala Lys Gly Arg Arg Lys Ala Phe Gly Thr Cys Ser
225 230 235 240

Ser His Leu Thr Val Val Thr Leu Phe Tyr Ser Ser Val Ile Ala Val
245 250 255

Tyr Leu Gln Pro Lys Asn Pro Tyr Ala Gln Glu Arg Gly Lys Phe Phe
260 265 270

Gly Leu Phe Tyr Ala Val Gly Thr Pro Ser Leu Asn Pro Leu Ile Tyr
275 280 285

Thr Leu Arg Asn Lys Glu Val Thr Arg Ala Phe Arg Arg Leu Leu Gly
290 295 300

Lys Glu Arg Asp Ser Arg Glu Ser Trp Arg Ala Ala
305 310 315

<210> 46

<211> 312

<212> PRT

<213> Homo sapiens

<400> 46

Met Val Asn Gln Ser Ser Thr Pro Gly Phe Leu Leu Leu Gly Phe Ser
1 5 10 15

Glu His Pro Gly Leu Glu Arg Thr Leu Phe Val Val Val Phe Thr Ser
20 25 30

Tyr Leu Leu Thr Leu Val Gly Asn Thr Leu Ile Ile Leu Leu Ser Ala
35 40 45

Leu Asp Pro Lys Leu His Ser Pro Met Tyr Phe Phe Leu Ser Asn Leu
50 55 60

Ser Phe Leu Asp Leu Cys Phe Thr Thr Ser Cys Val Pro Gln Met Leu
65 70 75 80

Val Asn Leu Trp Gly Pro Lys Lys Thr Ile Ser Phe Leu Asp Cys Ser
85 90 95

Val Gln Ile Phe Ile Phe Leu Ser Leu Gly Thr Thr Glu Cys Ile Leu
100 105 110

Leu Thr Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Gln Pro Leu
115 120 125

His Tyr Ala Thr Ile Ile His Pro Arg Leu Cys Trp Gln Leu Ala Ser
130 135 140

Val Ala Trp Val Ile Gly Leu Val Glu Ser Val Val Gln Thr Pro Ser
145 150 155 160

Thr Leu His Leu Pro Phe Cys Pro Asp Arg Gln Val Asp Asp Phe Val
165 170 175

Cys Glu Val Pro Ala Leu Ile Arg Leu Ser Cys Glu Asp Thr Ser Tyr
180 185 190

Asn Glu Ile Gln Val Ala Val Ala Ser Val Phe Ile Leu Val Val Pro
195 200 205

Leu Ser Leu Ile Leu Val Ser Tyr Gly Ala Ile Thr Trp Ala Val Leu

210

215

220

Arg Ile Asn Ser Ala Lys Gly Arg Arg Lys Ala Phe Gly Thr Cys Ser
225 230 235 240

Ser His Leu Thr Val Val Thr Leu Phe Tyr Ser Ser Val Ile Ala Val
245 250 255

Tyr Leu Gln Pro Lys Asn Pro Tyr Ala Gln Glu Arg Gly Lys Phe Phe
260 265 270

Gly Leu Phe Tyr Ala Val Gly Thr Pro Ser Leu Asn Pro Leu Ile Tyr
275 280 285

Thr Leu Arg Asn Lys Glu Val Thr Arg Ala Phe Arg Arg Leu Leu Gly
290 295 300

Lys Glu Met Gly Leu Thr Gln Ser
305 310

<210> 47

<211> 310

<212> PRT

<213> Mus musculus

<400> 47

Met Val Asn Gln Ser Ser Pro Val Gly Phe Leu Leu Leu Gly Phe Ser
1 5 10 15

Glu His Pro Gln Leu Glu Lys Val Leu Ile Val Val Val Leu Cys Ser
20 25 30

Tyr Leu Leu Thr Leu Leu Gly Asn Thr Leu Ile Leu Leu Leu Ser Thr
35 40 45

Leu Asp Pro Arg Leu His Ser Pro Met Tyr Phe Phe Leu Ser Asn Leu
50 55 60

Ser Phe Leu Asp Leu Cys Phe Thr Thr Cys Val Pro Gln Met Leu
65 70 75 80

Phe Asn Leu Trp Gly Pro Ala Lys Thr Ile Ser Phe Leu Gly Cys Phe
85 90 95

Val Gln Leu Phe Ile Phe Leu Ser Leu Gly Thr Thr Glu Cys Ile Leu
100 105 110

Leu Ala Val Met Ser Phe Asp Arg Tyr Val Ala Val Cys Gln Pro Leu
115 120 125

His Tyr Ala Thr Val Ile His Pro Arg Leu Cys Cys Gln Leu Ala Ala
130 135 140

Val Ala Cys Thr Ile Gly Leu Val Glu Ser Val Val Gln Thr Pro Ser
145 150 155 160

Thr Leu Arg Leu Pro Phe Cys Pro His His Gln Val Asp Asp Phe Val
 165 170 175

 Cys Glu Val Pro Ala Leu Ile Arg Leu Ser Cys Gly Asp Thr Thr Tyr
 180 185 190

 Asn Glu Ile Gln Met Ala Val Ala Ser Val Phe Ile Leu Val Val Pro
 195 200 205

 Leu Ser Leu Ile Leu Val Ser Tyr Gly Ala Ile Ala Arg Ala Val Leu
 210 215 220

 Arg Ile Ser Ser Ala Lys Gly Arg Arg Lys Ala Phe Gly Thr Cys Ser
 225 230 235 240

 Ser His Leu Ile Val Val Thr Leu Phe Tyr Ser Ser Val Ile Ala Val
 245 250 255

 Tyr Leu Gln Pro Lys Asn Pro Tyr Ala Arg Glu Arg Gly Lys Phe Phe
 260 265 270

 Gly Leu Phe Tyr Ala Val Gly Thr Pro Ser Leu Asn Pro Leu Ile Tyr
 275 280 285

 Thr Leu Arg Asn Lys Glu Val Lys Arg Ala Phe Arg Arg Leu Leu Trp
 290 295 300

 Lys Glu Val Lys Pro Ser
 305 310

<210> 48
 <211> 312
 <212> PRT
 <213> Mus musculus

<400> 48
 Met Val Asn Gln Ser Ser Pro Val Val Phe Phe Leu Leu Gly Phe Ser
 1 5 10 15

Glu His Pro Gln Leu Lys Lys Val Leu Phe Val Val Val Leu Cys Ser
 20 25 30

Tyr Leu Leu Thr Leu Leu Gly Asn Thr Leu Ile Leu Leu Ser Thr
 35 40 45

Leu Asp Pro Arg Leu His Ser Pro Met Tyr Phe Phe Leu Ser Asn Leu
 50 55 60

Ser Phe Leu Asp Leu Cys Phe Thr Thr Cys Val Pro Gln Met Leu
 65 70 75 80

Phe Asn Leu Trp Gly Pro Ala Lys Thr Ile Ser Phe Leu Gly Cys Phe
 85 90 95

Val Gln Leu Phe Ile Phe Met Ser Leu Gly Thr Thr Glu Cys Ile Leu
 100 105 110

Leu Thr Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Gln Pro Leu
115 120 125

His Tyr Ala Thr Lys Ile Asn Pro His Leu Cys Arg Gln Leu Ala Gly
130 135 140

Ile Ala Trp Ala Ile Gly Leu Val Gln Ser Ile Val Gln Thr Pro Pro
145 150 155 160

Thr Leu Lys Leu Pro Phe Cys Ser His Arg Gln Ile Asp Asn Phe Leu
165 170 175

Cys Glu Val Pro Ser Leu Ile Gln Leu Ser Cys Gly Asp Thr Thr Tyr
180 185 190

Asn Glu Ile Gln Met Ala Val Ala Ser Ile Phe Ile Val Val Val Pro
195 200 205

Leu Ser Leu Ile Leu Val Ser Tyr Gly Ala Ile Ala Arg Ala Val Leu
210 215 220

Lys Ile Ser Ser Ala Lys Gly Arg Arg Lys Ala Phe Gly Thr Cys Ser
225 230 235 240

Ser His Leu Ile Val Val Thr Leu Phe Tyr Ser Ser Val Ile Ala Val
245 250 255

Tyr Leu Gln Pro Lys Asn Pro Tyr Ala Arg Glu Arg Gly Lys Phe Phe
260 265 270

Gly Leu Phe Tyr Ala Val Gly Thr Pro Thr Leu Asn Pro Leu Val Tyr
275 280 285

Thr Leu Arg Asn Lys Glu Val Lys Arg Ala Phe Trp Lys Leu Leu Arg
290 295 300

Lys Asp Glu Asp Ser Glu Glu Ser
305 310

<210> 49
<211> 312
<212> PRT
<213> Mus musculus

<400> 49
Met Glu Val Asp Ser Asn Ser Ser Ser Gly Thr Phe Ile Leu Met Gly
1 5 10 15

Val Ser Asp His Pro His Leu Glu Ile Ile Phe Phe Ala Val Ile Leu
20 25 30

Ala Ser Tyr Leu Leu Thr Leu Val Gly Asn Leu Thr Ile Ile Leu Leu
35 40 45

Ser Arg Leu Asp Ala Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser

50	55	60
Asn Leu Ser Ser Leu Asp Leu Ala Phe Thr Thr Ser Ser Val Pro Gln		
65	70	75
Met Leu Lys Asn Leu Trp Gly Pro Asp Lys Thr Ile Ser Tyr Gly Gly		
85	90	95
Cys Val Thr Gln Leu Tyr Val Phe Leu Trp Leu Gly Ala Thr Glu Cys		
100	105	110
Ile Leu Leu Val Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Arg		
115	120	125
Pro Leu His Tyr Met Thr Val Met Asn Pro Arg Leu Cys Trp Gly Leu		
130	135	140
Ala Ala Ile Ser Trp Leu Gly Gly Leu Gly Asn Ser Val Ile Gln Ser		
145	150	155
Thr Phe Thr Leu Gln Leu Pro Phe Cys Gly His Arg Lys Val Asp Asn		
165	170	175
Phe Leu Cys Glu Val Pro Ala Met Ile Lys Leu Ala Cys Gly Asp Thr		
180	185	190
Ser Leu Asn Glu Ala Val Leu Asn Gly Val Cys Thr Phe Phe Thr Val		
195	200	205
Val Pro Val Ser Val Ile Leu Val Ser Tyr Cys Phe Ile Ala Gln Ala		
210	215	220
Val Met Lys Ile Arg Ser Val Glu Gly Arg Arg Lys Ala Phe Asn Thr		
225	230	235
Cys Val Ser His Leu Val Val Val Phe Leu Phe Tyr Gly Ser Ala Ile		
245	250	255
Tyr Gly Tyr Leu Leu Pro Ala Lys Ser Ser Asn Gln Ser Gln Gly Lys		
260	265	270
Phe Ile Ser Leu Phe Tyr Ser Val Val Thr Pro Met Val Asn Pro Leu		
275	280	285
Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Gly Ala Leu Gly Arg Leu		
290	295	300
Leu Gly Lys Gly Arg Gly Ala Ser		
305	310	

<210> 50
 <211> 357
 <212> PRT
 <213> Homo sapiens

<400> 50

Met	Asn	Trp	Val	Asn	Lys	Ser	Val	Pro	Gln	Glu	Phe	Ile	Leu	Leu	Val
1				5				10							15
Phe	Ser	Asp	Gln	Pro	Trp	Leu	Glu	Ile	Pro	Pro	Phe	Val	Met	Phe	Leu
				20				25							30
Phe	Ser	Tyr	Ile	Leu	Thr	Ile	Phe	Gly	Asn	Leu	Thr	Ile	Ile	Leu	Val
				35				40							45
Ser	His	Val	Asp	Phe	Lys	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Ser
					50			55							60
Asn	Leu	Ser	Leu	Leu	Asp	Leu	Cys	Tyr	Thr	Ser	Thr	Val	Pro	Gln	
					65			70							80
Met	Leu	Val	Asn	Ile	Cys	Asn	Thr	Arg	Lys	Val	Ile	Ser	Tyr	Gly	
					85				90						95
Cys	Val	Ala	Gln	Leu	Phe	Ile	Phe	Leu	Ala	Leu	Gly	Ser	Thr	Glu	Cys
					100			105							110
Leu	Leu	Leu	Ala	Val	Met	Cys	Phe	Asp	Arg	Phe	Val	Ala	Ile	Cys	Arg
					115			120							125
Pro	Leu	His	Tyr	Ser	Ile	Ile	Met	His	Gln	Arg	Leu	Cys	Phe	Gln	Leu
					130			135							140
Ala	Ala	Ala	Ser	Trp	Ile	Ser	Gly	Phe	Ser	Asn	Ser	Val	Leu	Gln	Ser
					145			150							160
Thr	Trp	Thr	Leu	Lys	Met	Pro	Leu	Cys	Gly	His	Lys	Glu	Val	Asp	His
					165			170							175
Phe	Phe	Cys	Glu	Val	Pro	Ala	Leu	Leu	Lys	Leu	Ser	Cys	Val	Asp	Thr
					180			185							190
Thr	Ala	Asn	Glu	Ala	Glu	Leu	Phe	Phe	Ile	Ser	Val	Leu	Phe	Leu	Leu
					195			200							205
Ile	Pro	Val	Thr	Leu	Ile	Leu	Ile	Ser	Tyr	Ala	Phe	Ile	Val	Gln	Ala
					210			215							220
Val	Leu	Arg	Ile	Gln	Ser	Ala	Glu	Gly	Arg	Arg	Lys	Ala	Phe	Gly	Thr
					225			230							240
Cys	Gly	Ser	His	Leu	Ile	Val	Val	Ser	Leu	Phe	Tyr	Gly	Thr	Ala	Ile
					245			250							255
Ser	Met	Tyr	Leu	Gln	Pro	Pro	Ser	Pro	Ser	Ser	Lys	Asp	Arg	Gly	Lys
					260			265							270
Met	Val	Ser	Leu	Phe	Cys	Gly	Ile	Ile	Ala	Pro	Met	Leu	Asn	Pro	Leu
					275			280							285
Ile	Tyr	Thr	Leu	Arg	Asn	Lys	Glu	Val	Lys	Glu	Ala	Phe	Lys	Arg	Leu
					290			295							300

Val Ala Lys Ser Leu Leu Asn Gln Glu Ile Arg Asn Met Gln Met Ile
305 310 315 320

Ser Phe Ala Lys Asp Thr Val Leu Thr Tyr Leu Thr Asn Phe Ser Ala
325 330 335

Ser Cys Pro Ile Phe Val Ile Thr Ile Glu Asn Tyr Cys Asn Leu Pro
340 345 350

Gln Arg Lys Phe Pro
355

<210> 51
<211> 317
<212> PRT
<213> Mus musculus

<400> 51
Met Ala Ile Asn Lys Ser Ser Gly Gly Asp Phe Ile Leu Val Gly Phe
1 5 10 15

Ser Asp Gln Pro Gln Leu Glu Lys Ile Leu Phe Val Leu Val Leu Ile
20 25 30

Ser Tyr Leu Leu Thr Leu Val Gly Asn Thr Ala Ile Ile Leu Val Ser
35 40 45

Cys Leu Asp Ser Ala Leu Gln Thr Pro Met Tyr Tyr Phe Leu Thr Asn
50 55 60

Leu Ser Phe Val Asp Ile Cys Phe Ser Thr Ser Ile Val Pro Gln Leu
65 70 75 80

Leu Trp Asn Leu His Gly Pro Ala Lys Thr Ile Thr Ala Thr Gly Cys
85 90 95

Ala Ile Gln Leu Tyr Val Ser Leu Ala Leu Gly Ser Thr Glu Cys Val
100 105 110

Leu Leu Ala Val Met Ala Phe Asp Arg Tyr Ala Ala Val Cys Arg Pro
115 120 125

Leu His Tyr Ala Thr Val Met His Pro Arg Leu Cys Gln Ser Leu Ala
130 135 140

Gly Val Ala Trp Leu Ser Gly Val Gly Asn Thr Leu Ile Gln Gly Thr
145 150 155 160

Ile Thr Leu Arg Leu Pro Arg Cys Gly Asn His Lys Ile Tyr His Phe
165 170 175

Ile Cys Glu Val Pro Ala Met Ile Lys Leu Ala Cys Val Asp Ile His
180 185 190

Ala Asn Glu Val Gln Leu Phe Met Ala Ser Leu Val Leu Leu Leu
195 200 205

Pro Leu Thr Leu Ile Leu Val Ser Tyr Gly Tyr Ile Ala Gln Ala Leu
210 215 220

Met Arg Leu Arg Ser Ala Leu Thr Trp Gly Lys Ala Leu Gly Thr Cys
225 230 235 240

Gly Ser His Leu Ile Val Val Leu Phe Tyr Gly Thr Ser Thr Ala
245 250 255

Val Tyr Ile His Pro Asn Ser Ser Tyr Ala Gln Ser Gln Gly Lys Phe
260 265 270

Ile Thr Leu Leu Tyr Thr Val Val Ile Pro Thr Leu Asn Pro Leu Ile
275 280 285

Tyr Thr Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Lys Arg Leu Val
290 295 300

Arg Lys Asp Ser Ser Thr Gly Lys Lys Ile Leu Ser Arg
305 310 315

<210> 52

<211> 357

<212> PRT

<213> Mus musculus

<400> 52

Met Asn Trp Val Asn Lys Ser Val Pro Gln Glu Phe Ile Leu Leu Val
1 5 10 15

Phe Ser Asp Gln Pro Trp Leu Glu Ile Pro Pro Phe Val Met Phe Leu
20 25 30

Phe Ser Tyr Ile Leu Thr Ile Phe Gly Asn Leu Thr Ile Ile Leu Val
35 40 45

Ser His Val Asp Phe Lys Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Asn Leu Ser Leu Leu Asp Leu Cys Tyr Thr Ser Thr Val Pro Gln
65 70 75 80

Met Leu Val Asn Ile Cys Asn Thr Arg Lys Val Ile Ser Tyr Gly Gly
85 90 95

Cys Val Ala Gln Leu Phe Ile Phe Leu Ala Leu Gly Ser Thr Glu Cys
100 105 110

Leu Leu Leu Ala Val Met Cys Phe Asp Arg Phe Val Ala Ile Cys Arg
115 120 125

Pro Leu His Tyr Ser Ile Ile Met His Gln Arg Leu Cys Phe Gln Leu
130 135 140

Ala Ala Ala Ser Trp Ile Ser Gly Phe Ser Asn Ser Val Leu Gln Ser

145	150	155	160
Thr Trp Thr Leu Lys Met Pro Leu Cys Gly His Lys Glu Val Asp His			
165	170	175	
Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Val Asp Thr			
180	185	190	
Thr Ala Asn Glu Ala Glu Leu Phe Phe Ile Ser Val Leu Phe Leu Leu			
195	200	205	
Ile Pro Val Thr Leu Ile Leu Ile Ser Tyr Ala Phe Ile Val Gln Ala			
210	215	220	
Val Leu Arg Ile Gln Ser Ala Glu Gly Gln Arg Lys Ala Phe Gly Thr			
225	230	235	240
Cys Gly Ser His Leu Ile Val Val Ser Leu Phe Tyr Gly Thr Ala Ile			
245	250	255	
Ser Met Tyr Leu Gln Pro Pro Ser Pro Ser Ser Lys Asp Arg Gly Lys			
260	265	270	
Met Val Ser Leu Phe Cys Gly Ile Ile Ala Pro Met Leu Asn Pro Leu			
275	280	285	
Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Glu Ala Phe Lys Arg Leu			
290	295	300	
Val Ala Lys Ser Leu Leu Asn Gln Glu Ile Arg Asn Met Gln Met Ile			
305	310	315	320
Ser Phe Ala Lys Asp Thr Val Leu Thr Tyr Leu Thr Asn Phe Ser Ala			
325	330	335	
Ser Cys Pro Ile Phe Val Ile Thr Ile Glu Asn Tyr Cys Asn Leu Pro			
340	345	350	
Gln Arg Lys Phe Pro			
355			

<210> 53

<211> 311

<212> PRT

<213> Mus musculus

<400> 53

Met Glu Glu Tyr Asn Thr Ser Ser Thr Asp Phe Thr Phe Met Gly Leu			
1	5	10	15

Phe Asn Arg Lys Glu Thr Ser Gly Leu Ile Phe Ala Ile Ile Ser Ile			
20	25	30	

Ile Phe Phe Thr Ala Leu Met Ala Asn Gly Val Met Ile Phe Leu Ile			
35	40	45	

Gln Thr Asp Leu Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser His
50 55 60

Leu Ser Leu Ile Asp Met Met Tyr Ile Ser Thr Ile Val Pro Lys Met
65 70 75 80

Leu Val Asn Tyr Leu Leu Asp Gln Arg Thr Ile Ser Phe Val Gly Cys
85 90 95

Thr Ala Gln His Phe Leu Tyr Leu Thr Leu Val Gly Ala Glu Phe Phe
100 105 110

Leu Leu Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn Pro
115 120 125

Leu Arg Tyr Pro Val Leu Met Ser Arg Arg Val Cys Trp Met Ile Ile
130 135 140

Ala Gly Ser Trp Phe Gly Gly Ser Leu Asp Gly Phe Leu Leu Thr Pro
145 150 155 160

Ile Thr Met Ser Phe Pro Phe Cys Asn Ser Arg Glu Ile Asn His Phe
165 170 175

Phe Cys Glu Ala Pro Ala Val Leu Lys Leu Ala Cys Ala Asp Thr Ala
180 185 190

Leu Tyr Glu Thr Val Met Tyr Val Cys Cys Val Leu Met Leu Leu Ile
195 200 205

Pro Phe Ser Val Val Leu Ala Ser Tyr Ala Arg Ile Leu Thr Thr Val
210 215 220

Gln Cys Met Ser Ser Val Glu Gly Arg Lys Lys Ala Phe Ala Thr Cys
225 230 235 240

Ser Ser His Met Thr Val Val Ser Leu Phe Tyr Gly Ala Ala Met Tyr
245 250 255

Thr Tyr Met Leu Pro His Ser Tyr His Lys Pro Ala Gln Asp Lys Val
260 265 270

Leu Ser Val Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Leu Ile
275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Thr Gly Ala Leu Lys Arg Ala Leu
290 295 300

Gly Arg Phe Lys Gly Pro Gln
305 310

<210> 54
<211> 223
<212> PRT
<213> Mus musculus

<400> 54
 Ser His Leu Ser Phe Ile Asp Met Met Tyr Ile Ser Thr Ile Val Pro
 1 5 10 15

 Lys Met Leu Val Asp Tyr Leu Leu Gly Gln Arg Thr Ile Ser Phe Val
 20 25 30

 Gly Cys Thr Ala Gln His Phe Leu Tyr Leu Thr Leu Val Gly Ala Glu
 35 40 45

 Phe Phe Leu Leu Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
 50 55 60

 Asn Pro Leu Arg Tyr Pro Val Leu Met Ser Arg Arg Ile Cys Trp Ile
 65 70 75 80

 Ile Ile Ala Gly Ser Trp Phe Gly Gly Ser Leu Asp Gly Phe Leu Leu
 85 90 95

 Thr Pro Ile Thr Met Ser Phe Pro Phe Cys Arg Ser Arg Glu Ile Asn
 100 105 110

 His Phe Phe Cys Glu Ala Pro Ala Val Leu Lys Leu Ala Cys Ala Asp
 115 120 125

 Thr Ala Leu Tyr Glu Thr Val Met Tyr Val Cys Cys Val Leu Met Leu
 130 135 140

 Leu Ile Pro Phe Ser Val Val Ile Ser Ser Tyr Ala Arg Ile Leu Ala
 145 150 155 160

 Thr Val Tyr His Met Ser Ser Val Glu Gly Arg Lys Lys Ala Phe Ala
 165 170 175

 Thr Cys Ser Ser His Met Thr Val Val Thr Leu Phe Tyr Gly Ala Ala
 180 185 190

 Ile Tyr Thr Tyr Met Val Pro His Ser Tyr His Ser Pro Ser Gln Asp
 195 200 205

 Lys Ile Phe Ser Val Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn
 210 215 220

<210> 55
 <211> 216
 <212> PRT
 <213> Homo sapiens

<400> 55
 Leu Ile Asp Met Met Tyr Ile Ser Thr Ile Val Pro Lys Met Leu Val
 1 5 10 15

 Asn Tyr Leu Leu Asp Gln Arg Thr Ile Ser Phe Val Gly Cys Thr Ala
 20 25 30

 Gln His Phe Leu Tyr Leu Thr Leu Val Gly Ala Glu Phe Phe Leu Leu

35

40

45

Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn Pro Leu Arg
50 55 60

Tyr Pro Val Leu Met Ser Arg Arg Val Cys Trp Met Ile Ile Ala Gly
65 70 75 80

Ser Trp Phe Gly Gly Ser Leu Asp Gly Phe Leu Leu Thr Pro Ile Thr
85 90 95

Met Ser Phe Pro Phe Cys Asn Ser Arg Glu Ile Asn His Phe Phe Cys
100 105 110

Glu Ala Pro Ala Val Leu Lys Leu Ala Cys Ala Asp Thr Ala Leu Tyr
115 120 125

Glu Thr Val Met Tyr Val Cys Cys Val Leu Met Leu Leu Ile Pro Phe
130 135 140

Ser Val Val Leu Ala Ser Tyr Ala Arg Ile Leu Thr Thr Val Gln Cys
145 150 155 160

Met Ser Ser Val Glu Gly Arg Lys Lys Ala Phe Ala Thr Cys Ser Ser
165 170 175

His Met Thr Val Val Ser Leu Phe Tyr Gly Ala Ala Met Tyr Thr Tyr
180 185 190

Met Leu Pro His Ser Tyr His Lys Pro Ala Gln Asp Lys Val Leu Ser
195 200 205

Val Phe Tyr Thr Ile Leu Thr Pro
210 215

<210> 56

<211> 316

<212> PRT

<213> Mus musculus

<400> 56

Met Glu Pro Trp Asn Ser Thr Leu Gly Thr Asp Phe Asn Leu Val Gly
1 5 10 15

Ile Leu Asp Asp Ser Gly Ser Pro Glu Leu Leu Cys Ala Thr Phe Thr
20 25 30

Ala Leu Tyr Met Leu Ala Leu Ile Ser Asn Gly Leu Leu Ile Leu Val
35 40 45

Ile Thr Met Asp Ala Arg Leu His Val Pro Met Tyr Phe Leu Leu Gly
50 55 60

Gln Leu Ser Leu Met Asp Leu Leu Phe Thr Ser Val Val Thr Pro Lys
65 70 75 80

Ala Val Ile Asp Phe Leu Leu Arg Asp Asn Thr Ile Ser Phe Glu Gly
85 90 95

Cys Ser Leu Gln Met Phe Leu Ala Leu Thr Leu Gly Gly Ala Glu Asp
100 105 110

Leu Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125

Pro Leu Asn Tyr Met Ile Phe Met Arg Pro Ser Ile Cys Trp Leu Met
130 135 140

Val Ala Thr Ser Trp Val Leu Ala Ser Leu Met Ala Leu Gly Tyr Thr
145 150 155 160

Thr Tyr Thr Met Gln Tyr Ser Tyr Cys Lys Ser Arg Lys Ile Arg His
165 170 175

Leu Leu Cys Glu Ile Pro Pro Leu Leu Lys Leu Ala Cys Ala Asp Thr
180 185 190

Ser Lys Tyr Glu Leu Met Val Tyr Val Met Gly Val Thr Phe Leu Ile
195 200 205

Pro Pro Leu Ala Ala Ile Leu Ala Ser Tyr Ser Leu Ile Leu Phe Thr
210 215 220

Val Leu His Met Pro Ser Asn Glu Gly Arg Lys Lys Ala Leu Val Thr
225 230 235 240

Cys Ser Ser His Leu Thr Val Val Gly Met Phe Tyr Gly Ala Ala Thr
245 250 255

Phe Met Tyr Val Leu Pro Asn Ser Phe His Ser Pro Arg Gln Asp Asn
260 265 270

Ile Ile Ser Val Phe Tyr Thr Ile Val Thr Pro Ala Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Thr Gly Ala Leu Ile Arg Val
290 295 300

Leu Gly Arg Tyr Ile Val Pro Ala His Pro Thr Leu
305 310 315

<210> 57
<211> 319
<212> PRT
<213> Mus musculus

<400> 57
Met Glu Phe Arg Asn Ser Thr Met Gly Asn Gly Phe Ile Leu Val Gly
1 5 10 15

Ile Leu Asp Asp Ser Gly Ala Pro Asp Leu Leu Cys Ala Thr Ile Thr
20 25 30

Ala Leu Tyr Met Leu Ala Leu Thr Ser Asn Gly Val Leu Leu Leu Val
 35 40 45

 Ile Thr Met Asp Ala Arg Leu Arg Val Pro Met Tyr Leu Leu Leu Gly
 50 55 60

 Gln Leu Ser Leu Met Asp Leu Leu Leu Thr Ser Val Ile Thr Pro Lys
 65 70 75 80

 Ala Val Ile Asp Phe Leu Leu Lys Asp Asn Thr Ile Ser Phe Gly Gly
 85 90 95

 Cys Ala Leu Gln Met Phe Leu Glu Leu Val Leu Gly Ser Ala Glu Asp
 100 105 110

 Leu Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125

 Pro Leu Asn Tyr Met Ile Phe Met Arg Pro Ser Val Cys Trp Phe Ile
 130 135 140

 Val Gly Thr Ile Trp Ile Leu Ala Ser Val Ile Ala Leu Gly Phe Thr
 145 150 155 160

 Ile Tyr Thr Met Asn Tyr Pro Phe Cys Lys Ser Arg Gln Ile Arg His
 165 170 175

 Leu Phe Cys Glu Ile Pro Pro Leu Leu Lys Leu Ala Cys Glu Asp Thr
 180 185 190

 Ser Thr Tyr Glu Leu Met Val Tyr Leu Ala Gly Val Ser Val Leu Ile
 195 200 205

 Leu Pro Leu Ala Val Ile Leu Ala Ser Tyr Val Arg Ile Leu Phe Thr
 210 215 220

 Val Leu His Met Pro Ser Asn Glu Gly Arg Lys Lys Ala Leu Val Thr
 225 230 235 240

 Cys Ser Ser His Leu Ile Val Val Gly Met Trp Tyr Gly Gly Ser Ser
 245 250 255

 Leu Met Tyr Val Leu Pro Ser Gln Phe His Ser Pro Lys Gln Asp Asn
 260 265 270

 Ile Leu Ser Ile Phe Tyr Thr Ile Val Thr Pro Ala Leu Asn Pro Leu
 275 280 285

 Ile Tyr Ser Leu Arg Asn Lys Glu Val Thr Gly Ala Leu Arg Arg Ile
 290 295 300

 Phe Gly Lys Trp Leu Gly Pro Ala His Phe Leu Gly Ser Ser Phe
 305 310 315

<211> 316

<212> PRT

<213> Homo sapiens

<400> 58

Met Glu Leu Trp Asn Phe Thr Leu Gly Ser Gly Phe Ile Leu Val Gly
1 5 10 15

Ile Leu Asn Asp Ser Gly Ser Pro Glu Leu Leu Cys Ala Thr Ile Thr
20 25 30

Ile Leu Tyr Leu Leu Ala Leu Ile Ser Asn Gly Leu Leu Leu Ala
35 40 45

Ile Thr Met Glu Ala Arg Leu His Met Pro Met Tyr Leu Leu Leu Gly
50 55 60

Gln Leu Ser Leu Met Asp Leu Leu Phe Thr Ser Val Val Thr Pro Lys
65 70 75 80

Ala Leu Ala Asp Phe Leu Arg Arg Glu Asn Thr Ile Ser Phe Gly Gly
85 90 95

Cys Ala Leu Gln Met Phe Leu Ala Leu Thr Met Gly Gly Ala Glu Asp
100 105 110

Leu Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125

Pro Leu Thr Tyr Met Thr Leu Met Ser Ser Arg Ala Cys Trp Leu Met
130 135 140

Val Ala Thr Ser Trp Ile Leu Ala Ser Leu Ser Ala Leu Ile Tyr Thr
145 150 155 160

Val Tyr Thr Met His Tyr Pro Phe Cys Arg Ala Gln Glu Ile Arg His
165 170 175

Leu Leu Cys Glu Ile Pro His Leu Leu Lys Val Ala Cys Ala Asp Thr
180 185 190

Ser Arg Tyr Glu Leu Met Val Tyr Val Met Gly Val Thr Phe Leu Ile
195 200 205

Pro Ser Leu Ala Ala Ile Leu Ala Ser Tyr Thr Gln Ile Leu Leu Thr
210 215 220

Val Leu His Met Pro Ser Asn Glu Gly Arg Lys Lys Ala Leu Val Thr
225 230 235 240

Cys Ser Ser His Leu Thr Val Val Gly Met Phe Tyr Gly Ala Ala Thr
245 250 255

Phe Met Tyr Val Leu Pro Ser Ser Phe His Ser Thr Arg Gln Asp Asn
260 265 270

Ile Ile Ser Val Phe Tyr Thr Ile Val Thr Pro Ala Leu Asn Pro Leu

275

280

285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Met Arg Ala Leu Arg Arg Val
 290 295 300

Leu Gly Lys Tyr Met Leu Pro Ala His Ser Thr Leu
 305 310 315

<210> 59
 <211> 315
 <212> PRT
 <213> Mus musculus

<400> 59
 Met Glu Val Cys Asn Ser Thr Leu Arg Ser Gly Phe Ile Leu Met Gly
 1 5 10 15

Ile Leu Asp Asp Asn Asp Phe Pro Glu Leu Leu Cys Ala Thr Ile Thr
 20 25 30

Ala Leu Tyr Leu Leu Ala Leu Thr Ser Asn Gly Leu Leu Leu Val
 35 40 45

Ile Thr Met Asp Thr Arg Leu His Val Pro Met Tyr Leu Leu Leu Trp
 50 55 60

Gln Leu Ser Leu Met Asp Leu Leu Leu Thr Ser Val Ile Thr Pro Lys
 65 70 75 80

Ala Ile Leu Asp Tyr Leu Leu Lys Asp Asn Thr Ile Ser Phe Gly Gly
 85 90 95

Cys Ala Leu Gln Met Phe Leu Ala Leu Thr Leu Gly Thr Ala Glu Asp
 100 105 110

Leu Leu Leu Ser Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125

Pro Leu Asn Tyr Thr Ile Leu Met Ser Gln Lys Val Cys Cys Leu Met
 130 135 140

Ile Ala Thr Ser Trp Ser Leu Ala Ser Leu Ser Ala Leu Gly Tyr Ser
 145 150 155 160

Met Tyr Thr Met Gln Tyr Pro Phe Cys Lys Ser Arg Gln Ile Arg His
 165 170 175

Leu Phe Cys Glu Ile Pro Pro Leu Leu Lys Leu Ala Cys Ala Asp Thr
 180 185 190

Ser Thr Tyr Glu Leu Met Val Tyr Leu Met Gly Val Thr Leu Leu Phe
 195 200 205

Pro Ala Leu Ala Ala Ile Leu Ala Ser Tyr Ser Leu Ile Leu Phe Thr
 210 215 220

Val Leu His Met Pro Ser Asn Glu Gly Arg Arg Lys Ala Leu Val Thr
225 230 235 240

Cys Ser Ser His Leu Thr Val Val Gly Met Trp Tyr Gly Gly Ala Ile
245 250 255

Val Met Tyr Val Leu Pro Ser Ser Phe His Ser Pro Lys Gln Asp Asn
260 265 270

Ile Ser Ser Val Phe Tyr Thr Ile Phe Thr Pro Ala Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Thr Gly Ala Leu Arg Arg Val
290 295 300

Leu Gly Lys Arg Leu Ser Val Gln Ser Thr Phe
305 310 315

<210> 60

<211> 316

<212> PRT

<213> Mus musculus

<400> 60

Met Glu Pro Trp Asn Ser Thr Leu Glu Ser Gly Phe Ile Leu Val Gly
1 5 10 15

Ile Leu Asp Gly Ser Gly Ser Pro Glu Leu Leu Cys Ala Thr Val Thr
20 25 30

Thr Leu Tyr Met Leu Ala Leu Ile Ser Asn Gly Leu Leu Leu Val
35 40 45

Ile Thr Val Asp Ala Arg Leu His Val Pro Met Tyr Leu Leu Leu Arg
50 55 60

Gln Leu Ser Leu Ile Asp Leu Leu Phe Thr Ser Val Val Thr Pro Asn
65 70 75 80

Thr Val Val Asp Phe Leu Leu Arg Asp Asn Thr Ile Ser Phe Glu Gly
85 90 95

Cys Ala Leu Gln Leu Phe Ser Ala Met Thr Leu Gly Gly Ala Glu Glu
100 105 110

Leu Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125

Pro Leu Asn Tyr Met Ile Phe Met Ser Pro Lys Ala Cys Arg Leu Met
130 135 140

Val Ala Ile Ser Trp Ile Leu Ala Ser Leu Ser Ala Leu Gly His Thr
145 150 155 160

Val Tyr Thr Met His Phe Pro Phe Cys Met Ser Gln Glu Ile Arg His
165 170 175

Leu Leu Cys Glu Val Pro Pro Leu Leu Lys Leu Ala Cys Ala Asp Thr
180 185 190

Ser Gln Tyr Glu Leu Met Val Tyr Val Thr Gly Val Ile Phe Leu Leu
195 200 205

Leu Pro Leu Ser Ala Ile Ile Thr Ser Tyr Ser Leu Ile Leu Phe Thr
210 215 220

Val Leu His Met Pro Ser Asn Glu Gly Arg Lys Lys Ala Leu Val Thr
225 230 235 240

Cys Ser Ser His Leu Thr Val Val Gly Met Phe Tyr Gly Gly Ala Thr
245 250 255

Phe Met Tyr Val Leu Pro Ser Ser Phe His Ser Pro Lys Gln Asp Asn
260 265 270

Ile Ile Ser Val Phe Tyr Thr Ile Val Thr Pro Ala Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Ile Gly Ala Val Arg Arg Val
290 295 300

Leu Gly Arg His Ile Leu Pro Ala His Ala Thr Val
305 310 315

<210> 61

<211> 217

<212> PRT

<213> Homo sapiens

<400> 61

Ile Ile Asp Ile Ser Tyr Ala Ser Asn Lys Val Pro Lys Met Leu Thr
1 5 10 15

Asn Leu Gly Leu Asn Lys Arg Lys Thr Ile Ser Phe Val Pro Cys Thr
20 25 30

Met Gln Thr Phe Leu Tyr Met Ala Phe Ala His Thr Glu Cys Leu Ile
35 40 45

Leu Val Met Met Ser Tyr Asp Arg Tyr Met Ala Ile Cys His Pro Leu
50 55 60

Gln Tyr Ser Val Ile Met Arg Trp Gly Val Cys Thr Val Leu Ala Val
65 70 75 80

Thr Ser Trp Ala Cys Gly Ser Leu Leu Ala Leu Val His Val Val Leu
85 90 95

Ile Leu Arg Leu Pro Phe Cys Gly Pro His Glu Ile Asn His Phe Phe
100 105 110

Cys Glu Ile Leu Ser Val Leu Lys Leu Ala Cys Ala Asp Thr Trp Leu

115

120

125

Asn Gln Val Val Ile Phe Ala Ala Ser Val Phe Ile Leu Val Gly Pro
130 135 140

Leu Cys Leu Val Leu Val Ser Tyr Ser Arg Ile Leu Ala Ala Ile Leu
145 150 155 160

Arg Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser
165 170 175

Ser His Leu Cys Met Val Gly Leu Phe Phe Gly Ser Ala Ile Val Met
180 185 190

Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys Val Leu
195 200 205

Ser Leu Phe Tyr Ser Leu Phe Asn Pro
210 215

<210> 62

<211> 310

<212> PRT

<213> Homo sapiens

<400> 62

Met Gly Asp Asn Ile Thr Ser Ile Thr Glu Phe Leu Leu Leu Gly Phe
1 5 10 15

Pro Val Gly Pro Arg Ile Gln Met Leu Leu Phe Gly Leu Phe Ser Leu
20 25 30

Phe Tyr Val Phe Thr Leu Leu Gly Asn Gly Thr Ile Leu Gly Leu Ile
35 40 45

Ser Leu Asp Ser Arg Leu His Ala Pro Met Tyr Phe Phe Leu Ser His
50 55 60

Leu Ala Val Val Asp Ile Ala Tyr Ala Cys Asn Thr Val Pro Arg Met
65 70 75 80

Leu Val Asn Leu Leu His Pro Ala Lys Pro Ile Ser Phe Ala Gly Arg
85 90 95

Met Met Gln Thr Phe Leu Phe Ser Thr Phe Ala Val Thr Glu Cys Leu
100 105 110

Leu Leu Val Val Met Ser Tyr Asp Leu Tyr Val Ala Ile Cys His Pro
115 120 125

Leu Arg Tyr Leu Ala Ile Met Thr Trp Arg Val Cys Ile Thr Leu Ala
130 135 140

Val Thr Ser Trp Thr Thr Gly Val Leu Leu Ser Leu Ile His Leu Val
145 150 155 160

Leu Leu Leu Pro Leu Pro Phe Cys Arg Pro Gln Lys Ile Tyr His Phe
165 170 175

Phe Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Thr His
180 185 190

Ile Asn Glu Asn Met Val Leu Ala Gly Ala Ile Ser Gly Leu Val Gly
195 200 205

Pro Leu Ser Thr Ile Val Val Ser Tyr Met Cys Ile Leu Cys Ala Ile
210 215 220

Leu Gln Ile Gln Ser Arg Glu Val Gln Arg Lys Ala Phe Cys Thr Cys
225 230 235 240

Phe Ser His Leu Cys Val Ile Gly Leu Phe Tyr Gly Thr Ala Ile Ile
245 250 255

Met Tyr Val Gly Pro Arg Tyr Gly Asn Pro Lys Glu Gln Lys Lys Tyr
260 265 270

Leu Leu Leu Phe His Ser Leu Phe Asn Pro Met Leu Asn Pro Leu Ile
275 280 285

Cys Ser Leu Arg Asn Ser Glu Val Lys Asn Thr Leu Lys Arg Val Leu
290 295 300

Gly Val Glu Arg Ala Leu
305 310

<210> 63

<211> 217

<212> PRT

<213> Homo sapiens

<400> 63

Ile Ile Asp Ile Ser Tyr Ala Ser Asn Asn Val Pro Lys Met Leu Thr
1 5 10 15

Asn Leu Gly Leu Asn Lys Arg Lys Thr Ile Ser Phe Val Pro Cys Thr
20 25 30

Met Gln Thr Phe Leu Tyr Met Ala Phe Ala His Thr Glu Cys Leu Ile
35 40 45

Leu Val Met Met Ser Tyr Asp Arg Tyr Met Ala Ile Cys His Pro Leu
50 55 60

Gln Tyr Ser Val Ile Met Arg Trp Gly Val Cys Thr Val Leu Ala Val
65 70 75 80

Thr Ser Trp Ala Cys Gly Ser Leu Leu Ala Leu Val His Val Val Leu
85 90 95

Ile Leu Arg Leu Pro Phe Cys Gly Pro His Glu Ile Asn His Phe Phe
100 105 110

Cys Glu Ile Leu Ser Val Leu Lys Leu Ala Cys Ala Asp Thr Trp Leu
 115 120 125
 Asn Gln Val Val Ile Phe Ala Ala Ser Val Phe Ile Leu Val Gly Pro
 130 135 140
 Leu Cys Leu Val Leu Val Ser Tyr Ser Arg Ile Leu Ala Ala Ile Leu
 145 150 155 160
 Gly Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser
 165 170 175
 Ser His Leu Cys Met Val Gly Leu Phe Phe Gly Ser Ala Ile Val Met
 180 185 190
 Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys Val Leu
 195 200 205
 Ser Leu Phe Tyr Ser Leu Phe Asn Pro
 210 215

<210> 64
 <211> 217
 <212> PRT
 <213> Homo sapiens
 <400> 64
 Ile Ile Asp Ile Ser Tyr Ala Ser Asn Lys Val Pro Lys Met Leu Thr
 1 5 10 15
 Asn Leu Gly Leu Asn Lys Arg Lys Thr Ile Ser Phe Val Pro Cys Thr
 20 25 30
 Met Gln Thr Phe Leu Tyr Met Ala Phe Ala His Thr Glu Cys Leu Ile
 35 40 45
 Leu Val Met Met Ser Tyr Asp Arg Tyr Met Ala Ile Cys His Pro Leu
 50 55 60
 Gln Tyr Ser Val Ile Met Arg Trp Gly Val Cys Thr Val Leu Ala Val
 65 70 75 80
 Thr Ser Trp Ala Cys Gly Ser Leu Leu Ala Leu Val His Val Val Leu
 85 90 95
 Ile Leu Arg Leu Pro Phe Cys Gly Pro His Glu Ile Asn His Phe Phe
 100 105 110
 Cys Glu Ile Leu Ser Val Leu Lys Leu Ala Cys Ala Asp Thr Trp Leu
 115 120 125
 Asn Gln Val Val Ile Phe Ala Ala Ser Val Phe Ile Leu Val Gly Pro
 130 135 140
 Leu Cys Leu Val Leu Val Ser Tyr Ser Arg Ile Leu Ala Ala Ile Leu

145	150	155	160
Gly Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser			
165		170	175
Ser His Leu Cys Met Val Gly Leu Phe Phe Gly Ser Ala Ile Val Met			
180		185	190
Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys Val Leu			
195	200	205	
Ser Leu Phe Tyr Ser Leu Phe Asn Pro			
210	215		
<210> 65			
<211> 310			
<212> PRT			
<213> Homo sapiens			
<400> 65			
Met Gly Asp Asn Ile Thr Ser Ile Arg Glu Phe Leu Leu Leu Gly Phe			
1	5	10	15
Pro Val Gly Pro Arg Ile Gln Met Leu Leu Phe Gly Leu Phe Ser Leu			
20		25	30
Phe Tyr Val Phe Thr Leu Leu Gly Asn Gly Thr Ile Leu Gly Leu Ile			
35	40		45
Ser Leu Asp Ser Arg Leu His Ala Pro Met Tyr Phe Phe Leu Ser His			
50	55	60	
Leu Ala Val Val Asp Ile Ala Tyr Ala Cys Asn Thr Val Pro Arg Met			
65	70	75	80
Leu Val Asn Leu Leu His Pro Ala Lys Pro Ile Ser Phe Ala Gly Arg			
85		90	95
Met Met Gln Thr Phe Leu Phe Ser Thr Phe Ala Val Thr Glu Cys Leu			
100		105	110
Leu Leu Val Val Met Ser Tyr Asp Leu Tyr Val Ala Ile Cys His Pro			
115	120		125
Leu Arg Tyr Leu Ala Ile Met Thr Trp Arg Val Cys Ile Thr Leu Ala			
130	135	140	
Val Thr Ser Trp Thr Thr Gly Val Leu Leu Ser Leu Ile His Leu Val			
145	150	155	160
Leu Leu Leu Pro Leu Pro Phe Cys Arg Pro Gln Lys Ile Tyr His Phe			
165		170	175
Phe Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Thr His			
180		185	190

Ile Asn Glu Asn Met Val Leu Ala Gly Ala Ile Ser Gly Leu Val Gly
195 200 205

Pro Leu Ser Thr Ile Val Val Ser Tyr Met Cys Ile Leu Cys Ala Ile
210 215 220

Leu Gln Ile Gln Ser Arg Glu Val Gln Arg Lys Ala Phe Arg Thr Cys
225 230 235 240

Phe Ser His Leu Cys Val Ile Gly Leu Val Tyr Gly Thr Ala Ile Ile
245 250 255

Met Tyr Val Gly Pro Arg Tyr Gly Asn Pro Lys Glu Gln Lys Lys Tyr
260 265 270

Leu Leu Leu Phe His Ser Leu Phe Asn Pro Met Leu Asn Pro Leu Ile
275 280 285

Cys Ser Leu Arg Asn Ser Glu Val Lys Asn Thr Leu Lys Arg Val Leu
290 295 300

Gly Val Glu Arg Ala Leu
305 310

<210> 66
<211> 484
<212> PRT
<213> Homo sapiens

<400> 66
Met Ala Ala Ala Thr Gln Phe Leu Ser Gln Pro Ser Ser Leu Asn Pro
1 5 10 15

His Gln Leu Lys Asn Gln Thr Ser Gln Arg Ser Arg Ser Ile Pro Val
20 25 30

Leu Ser Leu Lys Ser Thr Leu Lys Pro Leu Lys Arg Leu Ser Val Lys
35 40 45

Ala Ala Val Val Ser Gln Asn Ser Ser Lys Thr Val Thr Lys Phe Asp
50 55 60

His Cys Phe Lys Lys Ser Ser Asp Gly Phe Leu Tyr Cys Glu Gly Thr
65 70 75 80

Lys Val Glu Asp Ile Met Glu Ser Val Glu Arg Arg Pro Phe Tyr Leu
85 90 95

Tyr Ser Lys Pro Gln Ile Thr Arg Asn Leu Glu Ala Tyr Lys Glu Ala
100 105 110

Leu Glu Gly Val Ser Ser Val Ile Gly Tyr Ala Ile Lys Ala Asn Asn
115 120 125

Asn Leu Lys Ile Leu Glu His Leu Arg Ser Leu Gly Cys Gly Ala Val
130 135 140

Leu Val Ser Gly Asn Glu Leu Arg Leu Ala Leu Arg Ala Gly Phe Asp
145 150 155 160

Pro Thr Lys Cys Ile Phe Asn Gly Asn Gly Lys Ser Leu Glu Asp Leu
165 170 175

Val Leu Ala Ala Gln Glu Gly Val Phe Val Asn Val Asp Ser Glu Phe
180 185 190

Asp Leu Asn Asn Ile Val Glu Ala Ser Arg Ile Ser Gly Lys Gln Val
195 200 205

Asn Val Leu Leu Arg Ile Asn Pro Asp Val Asp Pro Gln Val His Pro
210 215 220

Tyr Val Ala Thr Gly Asn Lys Asn Ser Lys Phe Gly Ile Arg Asn Glu
225 230 235 240

Lys Leu Gln Trp Phe Leu Asp Gln Val Lys Ala His Pro Lys Glu Leu
245 250 255

Lys Leu Val Gly Ala His Cys His Leu Gly Ser Thr Ile Thr Lys Val
260 265 270

Asp Ile Phe Arg Asp Ala Ala Val Leu Met Ile Glu Tyr Ile Asp Glu
275 280 285

Ile Arg Arg Gln Gly Phe Glu Val Ser Tyr Leu Asn Ile Gly Gly
290 295 300

Leu Gly Ile Asp Tyr Tyr His Ala Gly Ala Val Leu Pro Thr Pro Met
305 310 315 320

Asp Leu Ile Asn Thr Val Arg Glu Leu Val Leu Ser Arg Asp Leu Asn
325 330 335

Leu Ile Ile Glu Pro Gly Arg Ser Leu Ile Ala Asn Thr Cys Cys Phe
340 345 350

Val Asn His Val Thr Gly Val Lys Thr Asn Gly Thr Lys Asn Phe Ile
355 360 365

Val Ile Asp Gly Ser Met Ala Glu Leu Ile Arg Pro Ser Leu Tyr Asp
370 375 380

Ala Tyr Gln His Ile Glu Leu Val Ser Pro Pro Pro Ala Glu Ala Glu
385 390 395 400

Val Thr Lys Phe Asp Val Val Gly Pro Val Cys Glu Ser Ala Asp Phe
405 410 415

Leu Gly Lys Asp Arg Glu Leu Pro Thr Pro Pro Gln Gly Ala Gly Leu
420 425 430

Val Val His Asp Ala Gly Ala Tyr Cys Met Ser Met Ala Ser Thr Tyr
435 440 445

Asn Leu Lys Met Arg Pro Pro Glu Tyr Trp Val Glu Glu Asp Gly Ser
450 455 460

Ile Thr Lys Ile Arg His Ala Glu Thr Phe Asp Asp His Leu Arg Phe
465 470 475 480

Phe Glu Gly Leu

<210> 67
<211> 254
<212> PRT
<213> Homo sapiens

<400> 67

Gly Asn Leu Leu Val Ile Leu Val Ile Leu Arg Thr Lys Lys Leu Arg
1 5 10 15

Thr Pro Thr Asn Ile Phe Leu Leu Asn Leu Ala Val Ala Asp Leu Leu
20 25 30

Phe Leu Leu Thr Leu Pro Pro Trp Ala Leu Tyr Tyr Leu Val Gly Gly
35 40 45

Asp Trp Val Phe Gly Asp Ala Leu Cys Lys Leu Val Gly Ala Leu Phe
50 55 60

Val Val Asn Gly Tyr Ala Ser Ile Leu Leu Leu Thr Ala Ile Ser Ile
65 70 75 80

Asp Arg Tyr Leu Ala Ile Val His Pro Leu Arg Tyr Arg Arg Ile Arg
85 90 95

Thr Pro Arg Arg Ala Lys Val Leu Ile Leu Leu Val Trp Val Leu Ala
100 105 110

Leu Leu Leu Ser Leu Pro Pro Leu Leu Phe Ser Trp Leu Arg Thr Val
115 120 125

Glu Glu Gly Asn Thr Thr Val Cys Leu Ile Asp Phe Pro Glu Glu Ser
130 135 140

Val Lys Arg Ser Tyr Val Leu Leu Ser Thr Leu Val Gly Phe Val Leu
145 150 155 160

Pro Leu Leu Val Ile Leu Val Cys Tyr Thr Arg Ile Leu Arg Thr Leu
165 170 175

Arg Lys Arg Ala Arg Ser Gln Arg Ser Leu Lys Arg Arg Ser Ser Ser
180 185 190

Glu Arg Lys Ala Ala Lys Met Leu Leu Val Val Val Val Phe Val
195 200 205

Leu Cys Trp Leu Pro Tyr His Ile Val Leu Leu Leu Asp Ser Leu Cys

210

215

220

Leu Leu Ser Ile Trp Arg Val Leu Pro Thr Ala Leu Leu Ile Thr Leu
225 230 235 240

Trp Leu Ala Tyr Val Asn Ser Cys Leu Asn Pro Ile Ile Tyr
245 250

<210> 68
<211> 241
<212> PRT
<213> Homo sapiens

<400> 68
Lys Leu Arg Thr Pro Thr Asn Ile Phe Leu Leu Asn Leu Ala Val Ala
1 5 10 15

Asp Leu Leu Phe Leu Leu Thr Leu Pro Pro Trp Ala Leu Tyr Tyr Leu
20 25 30

Val Gly Gly Asp Trp Val Phe Gly Asp Ala Leu Cys Lys Leu Val Gly
35 40 45

Ala Leu Phe Val Val Asn Gly Tyr Ala Ser Ile Leu Leu Leu Thr Ala
50 55 60

Ile Ser Ile Asp Arg Tyr Leu Ala Ile Val His Pro Leu Arg Tyr Arg
65 70 75 80

Arg Ile Arg Thr Pro Arg Arg Ala Lys Val Leu Ile Leu Leu Val Trp
85 90 95

Val Leu Ala Leu Leu Ser Leu Pro Pro Leu Leu Phe Ser Trp Leu
100 105 110

Arg Thr Val Glu Glu Gly Asn Thr Thr Val Cys Leu Ile Asp Phe Pro
115 120 125

Glu Glu Ser Val Lys Arg Ser Tyr Val Leu Leu Ser Thr Leu Val Gly
130 135 140

Phe Val Leu Pro Leu Leu Val Ile Leu Val Cys Tyr Thr Arg Ile Leu
145 150 155 160

Arg Thr Leu Arg Lys Arg Ala Arg Ser Gln Arg Ser Leu Lys Arg Arg
165 170 175

Ser Ser Ser Glu Arg Lys Ala Ala Lys Met Leu Leu Val Val Val
180 185 190

Val Phe Val Leu Cys Trp Leu Pro Tyr His Ile Val Leu Leu Leu Asp
195 200 205

Ser Leu Cys Leu Leu Ser Ile Trp Arg Val Leu Pro Thr Ala Leu Leu
210 215 220

Ile Thr Leu Trp Leu Ala Tyr Val Asn Ser Cys Leu Asn Pro Ile Ile
225 230 235 240

Tyr

<210> 69
<211> 253
<212> PRT
<213> Homo sapiens

<400> 69
Asn Leu Leu Val Ile Leu Val Ile Leu Arg Thr Lys Lys Leu Arg Thr
1 5 10 15

Pro Thr Asn Ile Phe Leu Leu Asn Leu Ala Val Ala Asp Leu Leu Phe
20 25 30

Leu Leu Thr Leu Pro Pro Trp Ala Leu Tyr Tyr Leu Val Gly Gly Asp
35 40 45

Trp Val Phe Gly Asp Ala Leu Cys Lys Leu Val Gly Ala Leu Phe Val
50 55 60

Val Asn Gly Tyr Ala Ser Ile Leu Leu Leu Thr Ala Ile Ser Ile Asp
65 70 75 80

Arg Tyr Leu Ala Ile Val His Pro Leu Arg Tyr Arg Arg Ile Arg Thr
85 90 95

Pro Arg Arg Ala Lys Val Leu Ile Leu Leu Val Trp Val Leu Ala Leu
100 105 110

Leu Leu Ser Leu Pro Pro Leu Leu Phe Ser Trp Leu Arg Thr Val Glu
115 120 125

Glu Gly Asn Thr Thr Val Cys Leu Ile Asp Phe Pro Glu Glu Ser Val
130 135 140

Lys Arg Ser Tyr Val Leu Leu Ser Thr Leu Val Gly Phe Val Leu Pro
145 150 155 160

Leu Leu Val Ile Leu Val Cys Tyr Thr Arg Ile Leu Arg Thr Leu Arg
165 170 175

Lys Arg Ala Arg Ser Gln Arg Ser Leu Lys Arg Arg Ser Ser Ser Glu
180 185 190

Arg Lys Ala Ala Lys Met Leu Leu Val Val Val Val Phe Val Leu
195 200 205

Cys Trp Leu Pro Tyr His Ile Val Leu Leu Leu Asp Ser Leu Cys Leu
210 215 220

Leu Ser Ile Trp Arg Val Leu Pro Thr Ala Leu Leu Ile Thr Leu Trp
225 230 235 240

Leu Ala Tyr Val Asn Ser Cys Leu Asn Pro Ile Ile Tyr
245 250

<210> 70
<211> 237
<212> PRT
<213> Homo sapiens

<400> 70
Pro Thr Asn Ile Phe Leu Leu Asn Leu Ala Val Ala Asp Leu Leu Phe
1 5 10 15

Leu Leu Thr Leu Pro Pro Trp Ala Leu Tyr Tyr Leu Val Gly Gly Asp
20 25 30

Trp Val Phe Gly Asp Ala Leu Cys Lys Leu Val Gly Ala Leu Phe Val
35 40 45

Val Asn Gly Tyr Ala Ser Ile Leu Leu Leu Thr Ala Ile Ser Ile Asp
50 55 60

Arg Tyr Leu Ala Ile Val His Pro Leu Arg Tyr Arg Arg Ile Arg Thr
65 70 75 80

Pro Arg Arg Ala Lys Val Leu Ile Leu Leu Val Trp Val Leu Ala Leu
85 90 95

Leu Leu Ser Leu Pro Pro Leu Leu Phe Ser Trp Leu Arg Thr Val Glu
100 105 110

Glu Gly Asn Thr Thr Val Cys Leu Ile Asp Phe Pro Glu Glu Ser Val
115 120 125

Lys Arg Ser Tyr Val Leu Leu Ser Thr Leu Val Gly Phe Val Leu Pro
130 135 140

Leu Leu Val Ile Leu Val Cys Tyr Thr Arg Ile Leu Arg Thr Leu Arg
145 150 155 160

Lys Arg Ala Arg Ser Gln Arg Ser Leu Lys Arg Arg Ser Ser Ser Glu
165 170 175

Arg Lys Ala Ala Lys Met Leu Leu Val Val Val Val Phe Val Leu
180 185 190

Cys Trp Leu Pro Tyr His Ile Val Leu Leu Leu Asp Ser Leu Cys Leu
195 200 205

Leu Ser Ile Trp Arg Val Leu Pro Thr Ala Leu Leu Ile Thr Leu Trp
210 215 220

Leu Ala Tyr Val Asn Ser Cys Leu Asn Pro Ile Ile Tyr
225 230 235

<210> 71
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 71
ttttatggga caaatctcctt ca

22

<210> 72
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 72
tgtacttcaa acccaaggcc aaggat

26

<210> 73
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 73
gaacaatgcg acagtcttat cc

22

<210> 74
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 74
ctattttggg gaataccacc at

22

<210> 75
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 75
tttctcgct ggaacccaag cttcat

26

<210> 76
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 76
ggaaggagag atgagaaaagg aa

22

<210> 77
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 77
acgcagtgtt gaggattaag tc

22

<210> 78
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 78
acagaaaagca ttcgggacct gcttct

26

<210> 79
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 79

tgatggttcc ataaaagatg gt

22

<210> 80
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 80
ctattttggg gaataccacc at

22

<210> 81
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 81
tctcgtctgg aacccaagcc tcataat

26

<210> 82
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 82
ggaaggagag atgagaaaagg aa

22

<210> 83
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 83
tttggctagt tccctaattcc at

22

<210> 84
<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 84
aattgcctct ctgtggcaac catagg

26

<210> 85
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 85
tggtaacttcg caaataaaaat gg

22

<210> 86
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 86
tctggaggct gttctctttg ta

22

<210> 87
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 87
tcttctacct cctgaccctt gtggga

26

<210> 88
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer

Sequence

<400> 88
ggggatccag atatgagatg

22

<210> 89
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 89
tgagcaggac aaagctgtat ct

22

<210> 90
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 90
ccttactccc atgctcaatc cactca

26

<210> 91
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 91
cctgtgacat ccttgttcct aa

22

<210> 92
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 92
acctcccaac aaccttctgt ag

22

<210> 93
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer Sequence

<400> 93
ccgtgacatc cttgttccta aggctg 26

<210> 94
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer Sequence

<400> 94
ccatgctcaa tccactcatt ta 22

<210> 95
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer Sequence

<400> 95
catcctcacc atccataaga tg 22

<210> 96
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer Sequence

<400> 96
aaaaggcctt caccacctgc tcct 24

<210> 97
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 97
gaagaggctg accactgtaa tg

22

<210> 98
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 98
gcccaagatg ctccctgga

18

<210> 99
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 99
caggtcatgg gtgtgaataa gatctcagcc

30

<210> 100
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 100
ggaacatctg catccccacac t

21

<210> 101
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 101
gatttcatcc tcatgggact ct

22

<210> 102
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 102
tcagacgatc caaacatcca gctcta

26

<210> 103
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 103
tcaggaaaaac cacaaagatg ac

22

<210> 104
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 104
ccctcatgtc cctatgctgt gt

22

<210> 105
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 105
cctcatccct gtgacgatca tttcaa

26

<210> 106

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 106
acggtgagga ggatgagtaa at

22

<210> 107
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 107
tggacaccct tttcatctgt ac

22

<210> 108
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 108
actgtcccaa aactcctggc agacat

26

<210> 109
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 109
gccacaaagg aaatgatctt ct

22

<210> 110
<211> 22
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 110
acctcccaac aaccttctgt ag

22

<210> 111
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 111
ccgtgacatc cttgttccta aggctg

26

<210> 112
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 112
ccatgctcaa tccactcatt ta

22

<210> 113
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 113
tgagcaggac aaagctgtat ct

22

<210> 114
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 114
ccttactccc atgctcaatc cactca

26

<210> 115
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 115
cctgtgacat ccttggccct aa

22

<210> 116
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 116
attctcaaga acggaggaag at

22

<210> 117
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 117
tttacagccct tttcaacccg atcctg

26

<210> 118
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 118
tctgcattcc taaggctgta ga

22

<210> 119
<211> 21
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer Sequence

<400> 119
aggaagatcc tttccctgtt t 21

<210> 120

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer Sequence

<400> 120
tacagccttt tcaacccgat cctgaa 26

<210> 121

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer Sequence

<400> 121
ctctcttag agcccctttc ac 22

<210> 122

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer Sequence

<400> 122
taccgatcat agcacatcat ca 22

<210> 123

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer Sequence

<400> 123
tcagacactc tgtaatagca aacgcga

27

<210> 124
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 124
tgctccttgc atacttcaga ct

22

<210> 125
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 125
attctcaaga acggaggaag at

22

<210> 126
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 126
tttacagcct tttcaacccg atcctg

26

<210> 127
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 127
tctgcattcc taaggctgtta ga

22